

University of Alberta
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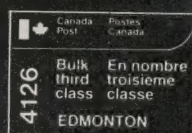
Summer 1988

NEW TRAIL



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Engineering
Anniversary
Issue

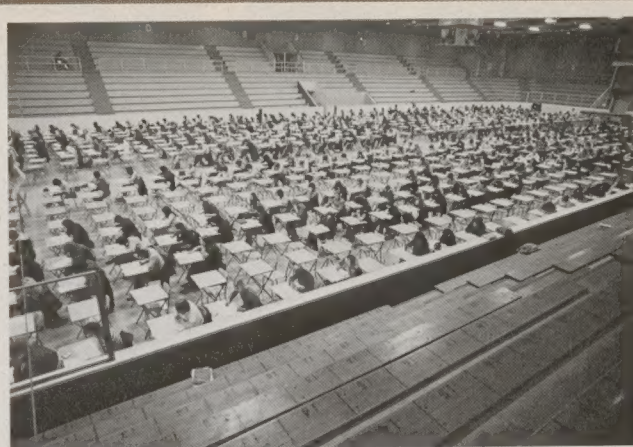
Graduates
and Society

Recalling
the Wilson
Years

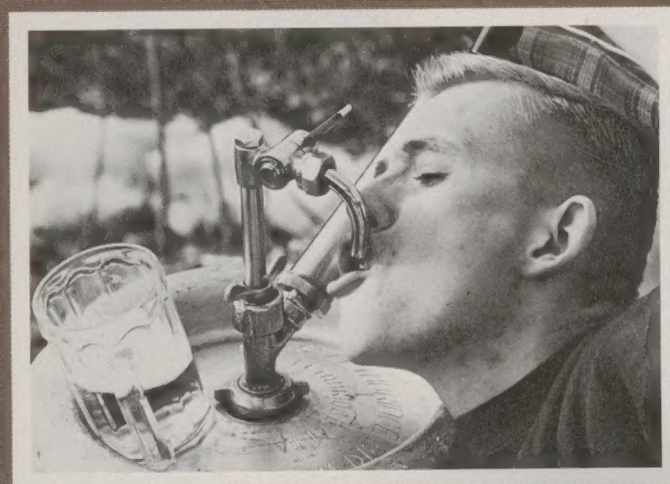
Whatever your favorite memories of campus...



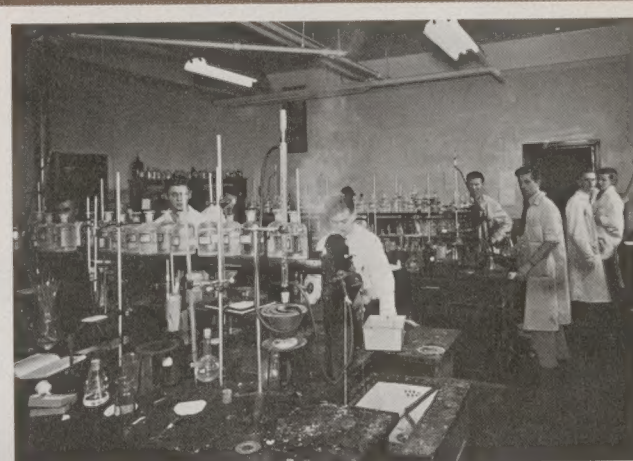
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NEW TRAIL

When this special issue of *New Trail* was conceived a major emphasis was to be the Faculty's impact on society. It seemed then that one of the best ways of illustrating that impact was to focus on some of the graduates who have gone on to make their marks on the world in various ways.

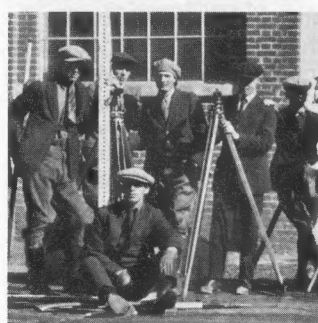
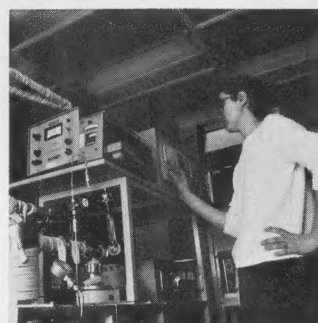
That wasn't to prove easy, but not because it was difficult to find suitable candidates. The opposite was true. Names kept coming to the fore: graduates who had distinguished themselves in the practice of the profession, graduates who had risen to the top in teaching and research, graduates who occupied high places in the corporate world, graduates who had outstanding records of public service, graduates whose career paths had taken surprising turns . . .

In the end we had to be more or less arbitrary in making our choices—our greatest concern was to give a broad sampling. The graduates we have chosen

to highlight in this special issue are some of the most noteworthy who have graduated from the Faculty in the past 75 years. They are representative of the very many Faculty of Engineering graduates who have had, and are continuing to have, an impact on our society.

I extend my thanks to all of the graduates whom we approached for their co-operation in letting us tell their stories. I am also most grateful to Bill Lipsett of the department of mechanical engineering and the others of his committee for their assistance in gathering much of the material which has made this Engineering 75th Anniversary issue possible.

Rick Pilger
Editor



Meeting 7 New Challenges

Throughout its history the Faculty of Engineering has changed in response to new challenges. But not everything has changed.

Special Report: 14 Graduates

Engineering graduates have made contributions to our world in a surprising variety of ways.

The Wilson Era 22

This excerpt from Professor Emeritus George Ford's history of the Faculty of Engineering is a warm look at one of the Faculty's first deans.

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Cover

Through a trick of the camera lens, a laser beam seems to emanate from the eye of Electrical Engineering Professor John Tulip. From Tulip's lab have come a number of improvements which are contributing to the everyday use of lasers in medicine.

Cover photo by Mike Pinder.



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Researchers Share Fascination

The purview of one is as broad as the human condition itself, the other concerns himself with the smallest portion of a substance capable of existing on its own and retaining the properties of the original substance, but the University's 1988 Research Prize laureates have more in common than the Prize itself.

Both Edward Mozejko, professor and chairman of comparative literature, and Michael James, professor of biochemistry, find fascination in their work.

Dr. Mozejko describes literature as first of all a fascinating and multi-layered human adventure, giving us opportunity for insight into all ranges of human emotions.

Dr. James, a specialist in x-ray crystallography, says that finding out what a molecule looks like is a lengthy process, involving a lot of people and a lot of computer time, "but when you know what you are looking at, it's very exciting to see it."

The 1988 laureates received their prizes and delivered lectures describing their research at ceremonies held at the Students' Union Building Theatre on March 30.

Dr. Mozejko, who speaks no less than 13 languages, is regarded as a leading Canadian Slavist and holds a joint appointment in the University's department of Slavics and East European studies. He is known for his ability to combine a knowledge of advanced literary theories with a strong sense of history in all his work. Literature, he says, communicates about life on both historical and contemporary levels—that is its greatest value.

During his Research Prize



Laureates and well wishers: behind prizewinners James (left) and Mozejko (right) stand (l. to r.) Board Chairman John Schlosser, President Myer Horowitz, Chancellor Tevie Miller and V-P Research Bob James.

lecture, Dr. Mozejko expressed concern about the current complexity of critical approaches to literature: they tend to shift attention to literature as an art in its own right, neglecting it as a reflection of human behavior. "The concept of teaching literature has been reduced to a passive status, and there is a danger of sterility in current trends. As scholars we have to remain alert, open to new ideas, exercise a high degree of awareness, and pursue active research.

Dr. Mozejko also made a plea for recognition of the Arts Faculty as one with a vast research area that requires adequate material resources.

In his lecture that same evening Dr. James, who is part of the University's highly respected MRC Group on Protein Structure and Function, used slides and movies to take the audience along with him as he went through the steps of solving a molecule's structure. He stressed that a key component in his work is the close collaboration with other researchers and the patient diligence of many colleagues. He also

paid special tribute to the work of Anita Sielecki, a close collaborator who is also his wife.

Dr. James's group recently solved the structure of renin, a highly specific enzyme that effects blood pressure. It was, as he himself described it, a great feat. "We were in competition with laboratories in the United States—and we beat them. Now we can start on the process of designing specific drugs to interact with renin."

Project Links Home Economics

The University's Faculty of Home Economics is entering a four-year linkage project with the department of home economics at Kenyatta University in Nairobi, Kenya.

The majority of the funding for the project is being provided by the Canadian International Development Agency through the Institutional Cooperation Development Service. The focus is on the development issues of Kenya, particularly those concerning women and families in rapidly expanding urban areas.

The project provides for graduate level education for Kenyatta University faculty members, seminars in

curricular and research conceptualization, faculty exchanges, and some library materials and specialized equipment.

Home Economics Dean Eloise Murray will visit Kenya in June 1988 to formalize the agreement. During her visit, she will be meeting with U of A alumni living in that country.

Library Combats Greed

In February the University's Sciences and Technology Library mounted an exhibit to show how greedy publishers were harming research libraries by sending the prices of scientific journals skyrocketing.

Included in the display entitled "CEN\$OR\$HIP" were sample issues of 29 journals to which the Library would like to subscribe but cannot because of the rapidly climbing prices attached to so many journals.

Merrill Distad, collections co-ordinator for the Library, says that the Library is caught between the researcher's need to have access to an ever-growing universe of published information and the upward spiral of the cost of this information.

Citing a number of journals which have increased dramatically in price, some by close to 300 per cent, in the past few years, Dr. Distad says that publishers have found a "gold mine." They realize they have a captive market in university libraries. "Academics must publish and university libraries must buy journals they're published in. It's a market that seems elastic and the publishers have pushed it to the limit," he says.

Over the past two years the University of Alberta has increased the Science and Technology Library's serials and journals budget by 14 per cent. But in that same

period the cost —price, plus foreign exchange—of journals has risen up to over 100 per cent.

The library committee of the University's General Faculties Council is currently considering action that could be undertaken in response to the situation—the encouragement of societies that would publish their own journals is one suggestion. In the meantime, the Library is hoping to raise additional money through a program that facilitates the donation of journal subscriptions. Anyone interested in further information is invited to contact Dr. Distad at 432-3790, Edmonton.

Deaf Student Establishes First

A ground-breaking event took place at the University of Alberta this year when David Mason went before his PhD candidacy committee: Mr. Mason, a graduate student in educational psychology, is deaf, and the candidacy committee examination was conducted in American Sign Language.

Committee members' questions were translated to him in the sign language by Debbie Russell, a certified interpreter with the campus Disabled Student Services, and she orally translated his sign language replies.

Mr. Mason's performance was judged "impressive" by the committee, and he can now proceed with his thesis, which will develop a model of education for the deaf combining American Sign Language (a language in its own right, not merely a manual expression of English words) and speech.

"It's a hot topic," says Stephen Carey, with reference to Mr. Mason's proposed thesis. Dr. Carey, who holds joint appointments in Faculté Saint-Jean and the department of educational

psychology, has had Mr. Mason as a student for four years. "The correct mix of verbal and sign language has been the subject of heated debate between the deaf and teachers of the deaf for decades," he says and likens it to the question of unilingual or bilingual francophone education which surfaces as an issue in Canada's minority Francophone communities.

A teacher in the Alberta School for the Deaf, Mr. Mason has hearing parents, a wife who is deaf and three hearing children. He hopes

that much of his dissertation material will be useful in preparing teachers for the deaf.

Course Celebrates Anniversary

The Faculty of Education's annual Municipal Refresher Course celebrated its 50th anniversary this year.

Initiated in 1938 by the association representing rural secretary-treasurers and Donald Cameron,

director of the department of extension at that time, the course was designed for administrators of the rural municipalities in Alberta. Over the years it has grown and established its reputation. This year's course, scheduled for June 5 to 8, attracted more than 200 registrants from both urban and rural municipalities.

The course moved from the University campus to the Banff Centre (originally the Banff School of Fine Arts) in 1950. In 1956 the first joint sessions were held with participants in Extension's

Around and About

■ Many international students who return to their homeland from study abroad find that they have changed more than they had realized and find it difficult to readapt. To prepare international students to deal with this challenge, the International Centre at the University has organized re-entry workshops to help the students prepare themselves psychologically for their return home. They are also given tips on how to prepare their friends and family to deal with the experience.

■ On April 10, a memorial service was held in Edmonton for the late Saretta Sparling, dean of women at the University from 1960 to 1968. In 1987 Ms. Sparling was the recipient of the Alumni Golden Jubilee Award, given in recognition of her many contributions to the University.

■ A new lectureship was inaugurated this year as part of the ceremonies recognizing the 75th anniversary of the Faculty of Medicine. The John S. Colter Lectureship was created by an endowment set up by friends and colleagues of Dr. Colter, who served as chairman of the department of biochemistry from 1961 to 1987. The inaugural lecture was delivered by Günter Blobel, professor of cell biology at Rockefeller University, New York.

■ One of only two high pressure multiple anvil presses in North America is now in place in a special room in the

University's Earth Sciences Building, where it will be used for research in geochemistry, geophysics and materials development. Described as a major step forward for such research in Canada, the press will enable researchers to conduct laboratory simulations of the earth's interior down to about 800 k. Research will be directed towards understanding what goes on in the earth's mantle (the layer between the earth's crust and its core).

■ Ian Gough, professor emeritus of physics, has been awarded the Chapman Medal by the Royal Astronomical Society of London "in recognition of his work in the development and use of magnetometer arrays for the investigation of conductive structures in the Earth's crust and upper mantle."

■ Late in 1987 Queen's University in Ontario recognized an eminent Canadian physicist whose name has become synonymous with the concept of black holes in the Universe when it awarded an honorary science degree to Dr. Werner Israel. A university professor at the University of Alberta, Dr. Israel is highly-respected for his contributions to the theory of gravitation.

■ A group of U of A geology researchers spent the last seven years investigating the geological evolution of the Cayman Islands in the Caribbean. By studying the

coral reefs surrounding the Islands, the researchers hope to obtain clues about what happened to the reefs formed when Alberta was at the bottom of a sea. The Cayman Island reefs are too young (24 million years old) to be rich in natural resources as are those in Alberta (300 million years old) which produce millions of dollars of oil and gas. The research will also have practical applications to the Islands, perhaps leading to a conservation program for the reefs.

■ The University's General Faculties Council has decided that eight months is sufficient time for students to demonstrate competency in writing. Beginning September 1989 undergraduate students registering for the first time will be required to meet the writing competency requirement by April 30 of the next calendar year. Previously they had 24 months.

■ Windsor Car Park is growing this summer. Almost \$2 million in construction modifications to the multi-level parkade facing 116 Street will increase its capacity by almost 25 per cent, providing accommodation for 234 more cars.

■ When Mel MacLeod, head of the Canada Council Killam program, was on campus earlier this year, he took time to congratulate geology professor Chris Scarfe on his recent Killam research fellowship and extended that of English professor Juliet McMaster.

course for school business officials—this combined effort still exists.

Over the years the specifics have changed from the basics of keeping tax ledgers, setting bylaws and preparing minutes to the more global organizational themes of situational leadership, corporate planning and computer-based information. However, the focus on strengthening local government administration remains the same.

The Banff Municipal Refresher Course is now an integral part of a complete training program for administrators of municipalities, big or small, urban or rural. Other elements are a local government citation program, a more advanced certificate program and a senior executive fellows program.

Pandas, Coaches Gain Honors

The Panda gymnasts led all University of Alberta intercollegiate teams in achievements this year.

In March the Pandas won the University Gymnastics Cup women's team championship—the only U of A team this year to go on to capture a national title after winning at the western conference level.

And Panda gymnastics coach Stephanie Bishop, in her first year as head coach, was one of three Alberta coaches to receive recognition as a coach of the year.

Similarly recognized were Suzie Smith and Clare Drake. Coach Smith, in her second year as the Pandas volleyball coach, was named the women's volleyball coach of the year. Coach Drake was voted hockey coach of the year for the second time, having been so honored previously in 1974-75.

Call for Nominations

Alumni Golden Jubilee Award

Selection of the 1988 recipient of the Alumni Golden Jubilee Award, the Alumni Association's most prestigious award, will take place in July.

This award was initiated in 1958 to honor individuals who have brought recognition to the University of Alberta. Any individual who has distinguished herself or himself through personal or professional accomplishment and has contributed directly or indirectly to the welfare of the University of Alberta may be nominated. The individual need not be a graduate of the University.

All nominations must be made in writing and be accompanied by statements in support of the nomination. All nominations must be received by the Association by June 30, 1988.

Please forward all nominations to:

Chair, Awards
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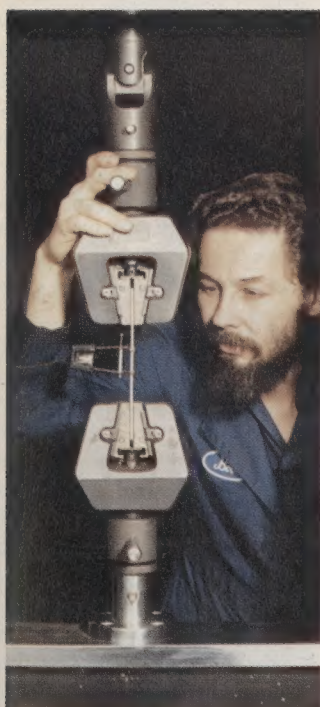
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Meeting New Challenges: Engineering Turns 75

By Rick Pilger



Above: Bob Konzuk, metallurgy technician, adjusts the strain gauge on a tensile test specimen in the Instron testing machine — extremely precise measurement is characteristic of engineering today.

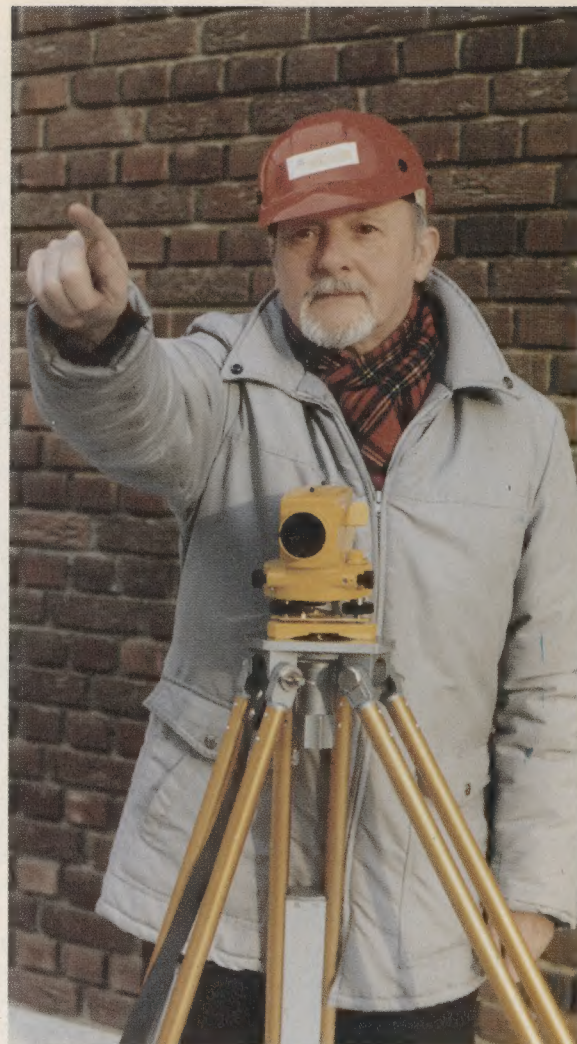
Above right: Survey school is a tradition as old as engineering at the University and Scotty Rogers has been a part of a good many of them. A long-time member of the civil engineering technical staff, he is now retired — but he'll be back to help out with survey school in the fall.

The tools used by the first engineer were to be found at the end of his (her?) arms: hands for digging, leveling and carrying, and fingers for counting and scratching the head. Today engineering has become immensely more sophisticated. Engineers are specialists. Tools of awesome power and supreme precision bring about their will, and for calculation there is the computer. However, scratching the head is still best done with the fingers, and the essential nature of engineering remains the same: the application of scientific principles to practical ends.

The teaching of applied science has a long history at the University of Alberta. One of the University's original professors was a lecturer in civil engineering (W. Muir Edwards) and the first applied science class of six members graduated in 1913 under the aegis of the Faculty of Arts and Sciences. That same year the Faculty of Applied Science was established as a separate entity, and this landmark event is being commemorated this year as the Faculty of Engineering (as it was renamed in 1947) celebrates its 75th Anniversary.

As science and technology have advanced and the University has grown, the engineering faculty has kept pace. Instead of a single program, it now has more than 19 offered through five distinct departments: chemical engineering; civil engineering; electrical engineering; mechanical engineering; and mining, metallurgical and petroleum engineering.

There were more than 400 graduates in 1987 — one hundred more if masters and doctoral students (who nominally register in the Faculty of Graduate Studies and Research)



are considered. In 1913 there were no women or foreign students. During the 1987-88 term the total undergraduate enrollment of 2,148 students included 201 women, and 6.8 per cent of the total were international students.

Another indication of the Faculty's growth is the research support it now attracts: faculty members obtained \$6.8 million in research funding for 1986-87, more than three times as much as was garnered only a decade earlier. Much of their work is on the leading edge in areas such as laser application, geotechnology, environmental engineering, materials, optimal control, microelectronics and telecommunications.

Bob James, now the University's vice-president (research), is a professor of electrical engineering who came to Alberta in 1965. He says that the current character of the Faculty can be traced back to its 1973 initiatives which brought about a new executive and administrative structure. Out of this new climate of consensus and broadly-based involvement in decision making have come the numerous innovations of subsequent years.

Computer technology has been integrated into almost every aspect of engineering teaching and research at the University.

During this same period has come another development so pervasive it is difficult to recall how very recent it is: the advent of the computer. Before the '70s the engineer's prime computational tool was the slide rule. Engineering students carried (or wore) them like badges of office, and their favorite slogan when sheer exuberance (or the bottled kind) cried forth for expression—"Engineers rule the world"—had not only to do with global domination but with the instrument so much a part of their identity. In the '70s the slide rule was replaced by the pocket calculator, and now widespread access to personal and main-frame computers—even supercomputers—provides computational tools of unprecedented power and efficiency.

The introduction of the computer has had far-reaching ramifications for his profession, says Fred Otto ('57 Chemical, '59 MSc), the U of A graduate who is now dean of the University's Faculty of Engineering: "The scope of things we can tackle is much broader, as are the alternatives that can be looked at in the time available. The computer is a very powerful analytical tool."

But the computer is not only an analytical tool: it is a design tool, a control tool, and a subject of study in itself. Computer technology has been integrated into almost every aspect of engineering teaching and research at the University of Alberta. While most engineering graduates have fond—or not so fond—memories of the mechanical drafting of Engineering Graphics, students now spend one third of the course behind the terminal of an IBM PC2 Model 60 learning AUTOCAD.

Recognizing the extensive use of digital computers in the design, construction and operation of everything from boilers to oil refineries, the department of chemical engineering

has placed a strong emphasis on computer applications. A major thrust is the use of real-time, sensor-based computers for on-line control and management of operating plants. In the department of mechanical engineering a new field of emphasis is the integration of computers in industrial applications for computer-aided design (CAD) and computer-aided manufacturing (CAM). Computer simulation and modelling of everything from gas outbursts and petroleum recovery systems to bucketwheel excavators and mineral process unit operations has become routine in the department of mining, metallurgical and petroleum engineering. Computer modelling is also an important design tool in the department of civil engineering. Its transport group, for example, is involved in the computer modelling of traveller's choices in urban transportation. It also works with advanced computer systems for traffic control.

The electrical engineering department not only makes extensive use of the computer at all levels of its teaching program and in its research, but about seven years ago it introduced a new program granting the Bachelor of Science degree in computer engineering. The program, offered in co-operation with the Faculty of Science's department of computer science, is a modification of the electrical engineering program in which some topics in that program's core were dropped and computing sciences courses added.

An offshoot of the electrical engineer's interest in computer technology is the Alberta Microelectronic Centre, which helps companies identify and adapt microelectronic applications to their products and operations. Joint research with industry on projects which have commercial market potential is an integral part of its services. An important adjunct to this is the special arrangement negotiated between the Alberta government and LSI Logic Corporation, a leading California microelectronics company, which give AMC access to LSI's sophisticated technology for designing and fabricating microchips.

The Alberta Microelectronic Centre is one of three non-profit corporations established at the U of A under Dr. James's leadership when he was chairman of the electrical engineering department. They derive from his belief that "you shouldn't undersell the amount of research going on in industry." Confident that the strong innovative abilities of his staff could be brought to bear more effectively on the real-world problems of industry through the synergism created by actively involving industry, Dr. James and others worked long and hard to establish the institutes. In addition to the AMC they are the Alberta Laser Institute, the first





industrially-oriented laser institute in the world, and the Alberta Telecommunications Research Centre, which fosters advanced research in telecommunications systems, theory and technology.

A similar, more recent institute is the Alberta Centre for Machine Intelligence and Robotics, a cross-faculty endeavor involving the Faculties of Science and Medicine as well as Engineering. Interested in diversifying the provincial economy, the Alberta government has given the centres major support and collectively the centres contribute greatly to an electronics infrastructure in Alberta which Dr. James describes as "second to none."

The U of A campus is also home to the Centre for Frontier Engineering Research. Funded by the Devonian Group of Charitable Foundations, the Governments of Alberta and Canada, the University and more than 25 private firms, C-FER undertakes collaborative research to enhance safe economic development of Canada's frontier petroleum resources.

The various engineering research institutes are now an important factor not only in the Faculty's program of research, but are also integral to its teaching, particularly at the graduate level. In addition to supporting faculty research through contracts and funded positions, the centres offer scholarships and

give students access to their research facilities.

Dean Otto points to another way in which his faculty, and its students in particular, are coming into closer contact with industry: the co-operative education program, introduced eight years ago and highly thought of by all involved. In the past year about 500 students took part in the program, which allows students to alternate periods of study with periods of paid, discipline-related work experience in co-operating employer organizations. Entailing a total of 20 months of work experience, it normally requires five years for completion. First introduced in mechanical engineering, it is now available in all engineering disciplines.

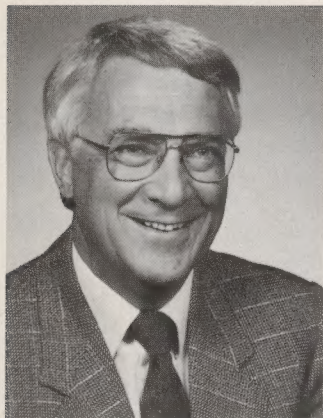
The dean explains why the program is so popular: "The students like it because, as well as giving them practical experience, it gives them an opportunity to clarify their career goals a little earlier. It also helps finance their education, and probably enhances their opportunity to find permanent employment. It's also well thought of by industry—it gives them an opportunity to look at our students and determine their appropriateness for their positions." In addition, the work experience tends to increase the students' motivation, he says.

A legacy of the co-op program is the Engineering Faculty Advisory Board. This board,



This page Top: Processing silicon wafers in an ultra-clean environment at the Alberta Microelectronic Centre. Above: Although engineering remains a predominantly male profession, women are enrolling in increasing numbers.

Opposite page Top: Sparks trace the outline of a pipe being welded by a laser being developed for industrial use by Electrical Engineering Professor Herb Seguin. Middle: The Faculty attracts visitors from around the world; here an overseas group examines a petroleum reservoir simulator. Bottom: Even extra-terrestrials get into the swing of Engineering Week.



Dean Fred Otto:
"It's a real challenge to try and give the students a reasonable background in all that's expected of them. . ."

to which the Faculty can turn for advice about such things as new program development, grew out of the advisory body originally established to help develop the co-op program.

For the past few years, the engineering faculty has also been nurturing a relationship across campus with the Faculty of Business. The dean says that both his faculty and the business faculty are attempting to put into place more expertise for the teaching of the management of technology — and not only to students in the respective faculties but to other interested individuals. "This becomes important when you are talking about the diversification of economy in the Province and the introduction of high technology. We are competing in an international environment, and we need to know how to do it."

As the engineering faculty enters its fourth quarter century, a number of other developments are on the horizon: expansion of the recently-introduced program in construction engineering; initiatives (likely including a research centre) in the engineering of advanced materials for specific industrial needs, and the Faculty's first-ever major undertaking in fund raising are some that the dean mentions. He has just recently visited Bangladesh in connection with another: a linkage agreement with Bangladesh's premier engineering school, to help that devel-

oping nation improve education in areas such as energy and water resources.

All is not change, however. After all, though many of the applications may be new, the scientific principles upon which engineering is based have not changed. And the Faculty doesn't change just for the sake of change: in January 1916 it was agreed that Faculty Council should meet in the afternoon of the second Monday of each month and Faculty Council still meets on the second Monday of each month.

And engineering students (even sans slide rule) are still *engineering students*. They plot against the Aggies and court the attention of the nurses. They choose their queen, wake up campus during Engineering Week and build their ice statues in the Quad. They also work hard.

"The engineering curriculum is a very full curriculum," says Dr. Otto. "It's a real challenge to try and give the students a reasonable background in all that's expected of them these days. They're supposed to be able to communicate . . . to be aware of the impact of technology on society . . . to have a good technical background . . . to know some management principles so they understand the importance of marketing . . ."

"Add it all up, and it's a lot to ask in four years of study." ■

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Enclose a clear, uncreased photocopy of your degree — it is not necessary to send the original. Enclose a deposit of \$20 per plaque (payable to the University of Alberta) and pay the balance upon delivery.

Please send me the following:

Brass and Walnut Plaques

- 9" x 12" plaque(s) @ \$59.95
- 11" x 15" plaque(s) @ \$69.95
- Walnut Stand(s) @ \$15.00

Glass and Brass Plaques

- Black border @ \$94.95
- Dark Green border @ \$94.95

I have enclosed a deposit of _____ (\$20 per plaque) and will pay the balance upon delivery, including \$4 per plaque for postage and handling. (Orders outside Canada must be prepaid, \$7.50 for handling.)

Name _____

Street _____

City _____ Province _____

Postal Code _____ Phone _____

Year/Degree _____

Mail to:

Alumni Affairs, University of Alberta, Edmonton T6G 2E8 Canada

Getting Ready for Reunion Weekend

With the schedule of events now complete and a number of class reunions already in the works, Reunion Weekend '88 is shaping up to be one of the most entertaining homecomings ever.

The very first event of Reunion Weekend '88 is the Awards Luncheon scheduled for Friday noon, September 23. At this luncheon the major Alumni Association scholarships will be awarded, as well as the prestigious Alumni Golden Jubilee Scholarship which is bestowed annually to an individual, not necessarily a graduate of the University, who has contributed significantly to the welfare of the University and brought recognition to it through his or her own distinguished activities.

Also on the opening Friday, the annual general meeting of the Alumni Association will be held. This is the first time that this event, previously held in the spring, has been scheduled in conjunction with the fall homecoming events, and all graduates are welcome to attend.

Special Hotel Rates Offered

Three Edmonton hotels are offering special rates for graduates attending the Reunion Weekend.

The downtown Westin Hotel, at which the Reunion Dinner and Dance will be held on the Saturday evening, is offering the special double-occupancy rate of \$71 per night (plus tax). Reservations can be made toll-free in Canada by dialling 1-800-228-3000.

Nearer the University, on the south side of Edmonton, the Renford Inn on Whyte is offering Reunion Weekend participants the double-

occupancy rate of \$45 per night (plus tax). Its toll free number, 1-800-661-6498, can be accessed from B.C., Saskatchewan and Alberta. Its phone number is (403) 433-9411.

Also on the south side and closer to the Edmonton International Airport, the Hotel Van Winkle is offering a single rate of \$47 and a double-occupancy rate of \$52 (plus tax). Call toll-free in Canada 1-800-661-9461.

Past Presidents to Host Event

On October 25, 1988 the Alumni Association's Past Presidents' Club will be hosting a presentation at the Jubilee Auditorium in Edmonton in conjunction with the fall launching of the Canadian edition of *Frozen In Time*, the book which chronicles the rediscovery of three crew members from the Franklin expedition. The book was released in Britain last fall to rave reviews and numerous print runs.

Co-authors Owen Beattie and John Geiger will narrate a slide show which will show the audience photographs of the discoveries made by Beattie and his team.

Frozen In Time, to be published in Canada by a Western Canadian printer, has already been chosen as a future featured selection by the Book of the Month Club. The book will be available by October of 1988.

Alumni and friends interested in purchasing tickets for the October 25 presentation should contact the Alumni Office.

Alumni Meet Down Under

On February 4 of this year University President Myer Horowitz, who was in Perth, Australia with his wife, Barbara, for the 14th Commonwealth Universities

Congress sent a note back to campus. The following is a portion of his text.

For Barbara and me a highlight of our visit occurred last evening when we met graduates of our University. This was the first time that University of Alberta alumni in Australia have gathered. One of my former graduate students, Dr. Len King, '79 PhD (educational administration), organized the very successful event. Dr. Neil Tuckwell, '80 PhD (educational administration), who is head of the School of Education at the Western College of Advanced Education, arranged for us to use the facilities of his institution.

The first thing I saw when we entered the lounge where the reception was to be held were University of Alberta flags and banners which had been sent by our Alumni Affairs Office. I thought that 15 to 20 people would be present. How surprised I was when the number increased to 50 including about 30 graduates.

Dr. Sandy Gordon, '86 PhD (physical education and sports studies), was the most recent graduate present and Stephen Merrick, '50 BSc(Eng), had the distinction of being the

Among those present in Perth were (l. to r.) Ronda Bana; Jack Bana, '77 PhD; Reggie Moran; Mike Moran, '78 BA (RecAdmin); Monica Reid; and John Reid, '76 MEd.

earliest graduate. The majority of our alumni in Perth were students in the 1970s, including a large number who were in master's and doctoral programs in Education.

As I moved around the room, over and over again I was asked by our former students to convey greetings to my faculty colleagues who were their professors. These people have great affection for our University. Once again it has become obvious to me how very important it is for us to have an international dimension and how useful it is to have a world-wide network of former students who are anxious to remain members of the University of Alberta family.

Record Set During Visits

Vancouver, Victoria and Kelowna, British Columbia were the locations of recent alumni gatherings.

The Royal Vancouver Yacht Club was the setting for the annual general meeting of the Vancouver Branch. More than 165 alumni and friends (a new branch record for attendance) gathered on April 10 to listen to Dean Douglas Wilson of the Faculty of Medicine discuss the latest issues and events affecting the University of Alberta. At the meeting Bill Rowen, '48 BSc(Eng), was chosen as the new president of the branch, taking over



I plan to be part of the fun of Reunion Weekend '88

Name and Address _____

Maiden Name (if applicable) _____

Year of Graduation and Degree _____

Name of Spouse/Guest _____

EVENTS REGISTRATION

Please indicate the events which you and/or your guest(s) plan to attend. Let us know how many tickets to reserve or the number in your party for other events.

Enclose your cheque for the tickets and we will reserve them and send you a confirmation along with a complete calendar of events.

Friday, September 23

- Awards Luncheon 11:30 a.m. - 1:00 p.m. / Faculty Club

TICKETS _____ @ \$10 = \$ _____

- Annual Meeting 1:00 p.m. - 2:30 p.m. / University House

NUMBER _____

- Wine and Cheese 7:00 p.m. - 9:00 p.m. / Faculty Club

TICKETS _____ @ \$3 = \$ _____

Saturday, September 24

- Breakfast 9:00 a.m. - 10:00 a.m. / Power Plant

TICKETS _____ @ \$3 = \$ _____

- Campus Tours 10:00 a.m. - 11:00 a.m. / Power Plant

NUMBER _____

- Travel Program Preview 11:00 a.m. - Noon / SUB

NUMBER _____

- Reunion Luncheon Noon - 1:30 p.m. / SUB

TICKETS _____ @ \$7 = \$ _____

- Football 2:00 p.m. - 4:30 p.m. / Commonwealth Stadium

NUMBER _____ (Tickets available at the Stadium)

- Health Sciences Tour Departs from SUB at 2:00 p.m.

NUMBER _____

- Dinner and Dance 6:30 p.m. - 1:00 a.m. / Westin Hotel

TICKETS _____ @ \$30 = \$ _____

Sunday, September 25

- President's Brunch 11:00 a.m. - 1:00 p.m. / University House

NUMBER _____ (Class of '23, '28 and '38)

TOTAL \$ _____

Cheques should be made payable to the University of Alberta Alumni Association. Mail completed forms and cheques to: Alumni Affairs / 430 Athabasca Hall / University of Alberta / Edmonton T6G 2E8

from Dorothy Weijer-Tolmie, '61 MSc, who completed her term of office. He will serve a two-year term.

Kelowna area graduates held their first-ever branch event on April 14. At a reception held in the Capri Hotel, John Schlosser, chairman of the University's Board of Governors, spoke to the 55 graduates in attendance and gave them an opportunity to view the new U of A video entitled "The Pursuit of Excellence". This gave alumni the opportunity to actually see many of the changes at the University in addition to hearing about them.

Victoria held its annual meeting on April 17 at the Princess Mary Restaurant Vessel. At this event alumni were given the opportunity to hear Chancellor Tevie Miller speak and to view the new U of A video. The 125 alumni and friends in attendance also chose a new president—Ron Phillips, '42 BSc(Eng). Dr. Phillips, a former director of the University's physical plant operations and later a University vice-president, succeeds Alison Burns, '80 BSc(MLS), who has moved to Edmonton.

Dental Graduates to be Honored

The Dental Alumni Association of the University of Alberta will be celebrating graduation anniversaries of its special classes in August. These classes will be recognized during a dinner

which will be held during the joint Alberta Dental Association/Canadian Dental Association Convention and is scheduled for Sunday evening August 21, 1988. Tickets are available through the Alumni Affairs Office (432-3224) and anyone wishing to organize a class reunion in connection with this event is invited to contact the Office.

This year the 1938 and 1963 dental classes will be specially honored, and a number of dental hygiene classes are organizing mini-reunions in connection with the convention. The highlight of the DAA dinner, however, will be the presentation of the Association's Distinguished Alumnus Award to the 1988 recipient, Ted Allison, '53 DDS of Calgary.

Dr. Allison, who has been in private dental practice since 1953, has an exemplary record of service to his profession. He is a former president of the Alberta Dental Association and of the Western Canada Dental Society. He has served on both the board of governors and executive council of the Canadian Dental Association.

Dr. Allison has also been active in community service. He is a former vice-president of the Canadian T.B. and Respiratory Disease Association, has been an associate director of the Calgary Exhibition and Stampede since 1966, and has served the Alberta Motor Association as chairman of the Calgary Branch.

LONDON, ENGLAND

Alberta Beef Dinner Saturday, September 3, 1988

GUEST SPEAKER: Dr. Myer Horowitz
President,
University of Alberta

Watch your mail for further details.

Are You a Former SCMer?

Would you like to know about the Movement today? Issues, news, conferences? Would you like to share your experience and history with the Movement?

Please write to:

Frederick Dunleavy
General Secretary
SCM of Canada National Office
Suite C3, 310 Danforth Ave
Toronto M4K 1N6

Council Vacancies

Graduates are being sought to fill a number of openings on Alumni Council. With the expiration of current terms in September, vacancies will exist for individuals to represent the following faculties for three-year terms:

**Education
Library Science
Pharmacy**

Under the terms of the Alumni Association constitution, a person must have graduated from a faculty in order to represent it on Council, and must be nominated by at least three fellow graduates from that faculty.

Individuals wishing to make nominations or themselves willing to serve, are invited to contact Sandra Kereliuk (432-3224) for further information. Nominations are requested by July 8, 1988.

U of A Mixed Chorus Anniversary Book

In 1994 the U of A Mixed Chorus will be 50 years old. To commemorate this anniversary, a history of the UAMC is planned. The goal is to have a book ready for sale early in 1994.

UAMC alumni can help by providing contributions of stories of people, places and events, photographs, programs, tickets, newspaper articles or reviews, and any other memorabilia that will illustrate Chorus history. Arrangements can be made on an individual basis for donating or loaning material. Gifts will be forwarded to the University Archives for permanent safe-keeping after use. Items are needed by the end of 1988.

For further information, please contact:

Chris Ashdown
11151-62 Avenue
Edmonton T6H 1N3
(435-1861)

St. Joseph's College Alumni (Former Residents, Students)

Please mark your calendar for the following events where you will be warmly welcomed:

■ A special mass will be held at the College for all SJC alumni attending the University's Reunion Weekend '88. Brunch will follow.

12:30 p.m.
Sunday, September 25, 1988

■ The Annual Reunion Banquet for SJC alumni will be held at the College in great style.

Saturday, November 5, 1988

Home and Auto Insurance

The Executive Committee of the University of Alberta Alumni Association is proud to recommend to its members THE OPTIMUM car and home insurance program. After having examined proposals from different companies, we selected Monnex Insurance Brokers on the basis of their recognized expertise in servicing professionals.

THE OPTIMUM offers a choice of insurance options and a quality service.

Monnex Insurance Brokers

is a well established firm in Alberta, with offices in Edmonton and Calgary.

A special offer has been negotiated for University of Alberta graduates: a first-time purchase bonus of \$25. Don't miss this opportunity to join the ranks of their satisfied clients, while saving on your next insurance purchase.

Barbara Kozoriz
President
Alumni Association

1988 Class Reunions

The Alumni Association is happy to assist individual classes in organizing special events during the homecoming activities of Reunion Weekend '88 (September 23-25, 1988) or reunions at other times. The following classes are currently planning reunions for the coming year:

CLASS/PLACE/DATE/CONTACT

'38 BSc Nursing Edmonton/September 23-25/Helen Sabin
'38 Law Edmonton/September 23-25/Grace Dickson
'38 Medicine Edmonton/September 28-30/Dr L O Bradley
'48 Medicine Edmonton/September 28-30/Dr John Lipinski
'48 Civil Engineering Edmonton/September 23-25/Alex Mair
'53 Dentistry Edmonton/August 21-24/Dr David Buchanan
'53 Medicine Edmonton/September 28-30/Dr Frank Haley
'53 Civil Engineering Edmonton/October 7-8/Glen Jones
'57 Dentistry Edmonton/August 21-24/Dr Jules Theodore
'58 Agriculture Red Deer/July 29-31/Walt Gerts
'58 Dentistry Edmonton/August 21-24/Dr James Duncan
'63 Agriculture Edmonton/September 23-25/Gerald Coen
'63 Dental Hygiene Edmonton/August 21-24/Mary Ann King
'63 Dentistry Edmonton/August 21-24/Dr Kindrachuk
'63 Home Economics September 23-25/Lynn Dugiou
'63 Law Edmonton/September 23-25/Ann Russell
'63 Nursing (Dip) Banff/Sandi Lockhart
'63 Mechanical Engineering Edmonton/October 7-8/Gary Faulkner
'63 Medicine Edmonton/June 2-3/Dr E G King & Dr Heslip
'63 Physical Education Edmonton/September 23-25/David Cragg
'68 Agriculture Edmonton/July 1-3/Brian Pinchbeck
'68 Medicine Edmonton/October 13-16/Dr M Lieberman/Dr R Arnold
'71 Dental Hygiene Edmonton/August 21-24/Denise Matushak
'72 Dental Hygiene Edmonton/August 21-24/Robin Irvin
'73 BSc Nursing Edmonton/September 23-25/Elaine Fleming
'73 Civil Engineering Edmonton/September 16-17/Wes Snihur
'73 Nursing (DipSept) Edmonton/August 27-28/Moira Conrad
'74 Dental Hygiene Edmonton/August 21-24/Jackie Dahl
'75 Dentistry Edmonton/August 21-24/Marjorie Miller
'76,'77,'78 Agriculture Edmonton/July 15-17/Harvey Maskowitz
'78 Dental Hygiene Edmonton/August 21-24/Vanessa Cowley
'78 Medicine Banff/September 2-4/Dr Christine Sharek
'78 BSc Nursing Edmonton/August 27-28/Pat Breakey
'81 Dental Hygiene Edmonton/August 21-24/Laine Lowe
'83 Dental Hygiene Edmonton/August 21-24/Jennifer Chorney
ALL Medical Lab Science Edmonton/June 24-26/Sheilah Stelmashuk

Some locations and dates are tentative. Should you require information on the reunions noted, or if you wish to organize a reunion for a class not listed, please contact the Office of Alumni Affairs.

Special Report: Graduates

In June 1987 Joseph Charyk ('42 Eng Physics) received the National Medal of Technology from U.S. President Reagan at the White House. A former head of the Communication Satellite Corporation based in Washington, D.C. and at one time in charge of all scientific research for the U.S. Air Force, Charyk was cited for his role in developing the INTELSAT system, now serving 160 nations and territories.

Charyk is one of many University of Alberta engineering graduates who have left their mark on our society. Their achievements contribute a powerful tribute to the Faculty of Engineering as it celebrates 75 years.

Engineering graduates have followed a variety of paths. Some have remained in the academic world—George Ford ('42 Civil) and Fred Otto ('57 Chemical) both went on to become deans of the Faculty. Others—prominent among them Don Stanley ('40 Civil) of Edmonton and Elio d'Appolonia ('42 Civil) of Pennsylvania—have had outstanding consulting careers. Others—such as Charles Hantho ('53 Chemical), chief executive officer of C-I-L Inc., have found their way into corporate offices. A great many—Jim Stanford ('60 Petroleum), president of Petro Canada Resources, and Donald Loughheed ('48 Mining), executive vice-president of Esso Resources Canada are but two—provide leadership within the energy industry.

The graduates' public service record is also laudable. Harvie Andre ('62 Chemical) and Tom Siddon ('63 Mechanical) are federal cabinet ministers. Bill Yurko ('50 Chemical) is another veteran of elected office. Don Harvie ('45 Civil) heads Calgary's Glenbow Foundation, and Harry Hole ('44 Civil) is a former president of Edmonton Northlands. Edge King ('43 Electrical) heads the U of A Hospitals board.

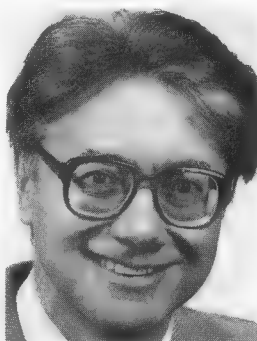
While most graduates have made their contributions as engineers or in fields not far removed, there are those who have taken less-travelled paths. Among these are Michael Dubas ('53 Civil) who devoted himself to the priesthood; Charles Simmons ('50 Mining) who spent two dozen years as a high school principal; and Edward Bishop, ('34 Electrical) who distinguished himself in a legal career.

To celebrate the achievements of the University's engineering alumni, in this issue *New Trail* focuses on a small sampling (chosen rather arbitrarily) of the Faculty's graduates who have done noteworthy things since receiving their BSc(Eng) degree.

Robert Frederking: A Scientist Who Knows His Subject Cold.

You don't get to be an international expert in the field of ice mechanics without getting cold now and again, and Bob Frederking ('64 Mechanical) has spent his share of time out in the cold. A research scientist with the National Research Council's Division of Building Research, Frederking routinely endures rigorous field conditions—darkness, high winds, low temperatures, isolation and blowing snow—in his quest to learn more about the nature of ice. His research is of immense practical interest to the resource industry, particularly in connection with the construction of artificial islands for drilling operations in northern waters.

Given the aura of coldness which surrounds his work, it is surprising to hear Frederking describe the ice he studies as "a high temperature material." But he elaborates: "You're always working within 10 to 15 degrees Celsius of its melting point; even under low loads, natural ice will flow." That, he speculates, may be one reason why ice in nature usually puts loads on structures that are lower than theory predicts they should.



Frank King: An Entrepreneurial Bent

Since his graduation, Frank King ('58 Chemical) has gained considerable expertise (along with a few hard knocks) operating his own companies and serving for a period as vice-president of Turbo Resources. He had to draw upon all that experience in his most recent challenge: staging the '88 Calgary Winter Olympics. King was the president of the association which secured the Games for Calgary (the chairman was another U of A engineering grad, Robert Niven ['64 Mechanical]) and then went on to serve as head of the organizing committee, OCO '88.

King describes the staging of the Games as "one of the most difficult things someone could be asked to do." There were, for instance, all three levels of government to be kept happy, as well as the international sporting federations and the general public (not to mention the media). And to do this you start with a "zero-based budget." With the Games now concluded and considered in many quarters "the most successful Winter Games ever," King can derive satisfaction from their legacy: the bricks and mortar of the impressive sports facilities constructed; the financial legacy of \$150 million in endowments to support winter sports long into the future; and the international goodwill created as Calgarians, Albertans, and Canadians took the world spotlight as good hosts. King doesn't plan to continue in the public spotlight himself. As he told one reporter: "I'm basically an entrepreneurial person, and I miss the opportunity to make deals."



Gordon Patterson: Following the Wright Brothers

In his 1977 book, *Pathways to Excellence*, Gordon Patterson ('31 Engineering Physics) recalls some of the influences which led to his interest in aircraft and culminated in one of Canada's most distinguished careers in aeronautical science: a brother who was a World War I fighter pilot; a newspaper route that included the U of A campus and gave him an opportunity to study a display aircraft of World War I vintage; and a summer spent flying over Canada's northland on aerial survey.

After receiving masters and doctoral degrees from the University of Toronto, Patterson spent four years (1935-39) as a scientific officer with the RAF establishment at Farnborough, England, conducted aerodynamics research in Australia for the next five years, and then spent a further two years investigating supersonic aerodynamics and jet propulsion in the U.S.A. (Princeton and CalTech). Returning to Canada and the U of T, he assumed the position of professor of aerodynamics and in 1949 founded that university's respected Institute for Aerospace Studies, which he headed until his retirement in 1974.

Among Patterson's many honors are a number of honorary degrees, including one from the University of Alberta in 1958. In 1965 came another great honor: he was selected to present the 28th Wright Brothers Lecture to the American Institute of Aeronautics and Astronautics. Now retired, he lives in Thornbury, Ontario.

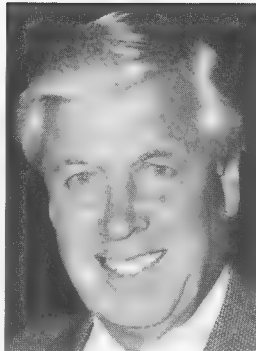


Matt Baldwin: Curling Hall of Famer

Amidst the sporting paraphernalia displayed at the Alberta Sports Hall of Fame in Calgary's Petro Canada Square is a plaque dedicated to a legend of Canadian Curling: Matt Baldwin ('51 Petroleum). The plaque describes him as a "daring shotmaker" whose experiments with strategy were often brilliant. "Famous for his long controlled slide, Matt Baldwin was already showing winning form during his student days at the University of Alberta in Edmonton."

Baldwin's winning form was actually in evidence earlier. Before transferring to the petroleum engineering program introduced at the U of A, he had represented the University of Saskatchewan at Canada's first intervarsity curling championship. He won that championship twice for Alberta, and his on-ice accomplishments after graduation—including three Brier championships in the '50s—earned him entry not only into the Edmonton and Alberta Sports Halls of Fame, but into the Canadian Curling Hall of Fame and the Canadian Sports Hall of Fame. Among longtime curling fans there are those who consider him the best shotmaker ever.

Although he has never used his engineering degree to earn his livelihood, Baldwin has spent his entire working life associated with the oil industry, carving a niche for himself in the oil well servicing rig business. His Edmonton-based Embee Consulting group of companies (Wardin, Poncho, Grizzly, and Hi West) operates 45 rigs for remedial servicing of wells. "No doubt my curling background opened many doors," Baldwin reflects. And, he adds, there were times when having a degree in petroleum engineering didn't hurt either.



Dave Marsden: His Head (and Heart) in the Clouds

Dave Marsden ('55 Engineering Physics) first took the controls of an aircraft as an air force pilot trainee in the '50s, and since then flight has been a consuming interest in his life. Not only is aerodynamics his academic specialty as a professor of mechanical engineering at the University of Alberta, but whenever he gets a chance he's up among the clouds himself, soaring at the controls of a sailplane.

Since 1968 when he piloted his glider all the way from Edmonton to Regina, Marsden has held the Canadian territorial gliding distance record. The Edmonton-to-Regina record lasted until 1984 when Marsden, flying his glider in company with one piloted by Dr. Michael Apps of Edmonton, extended it some 500 or so kilometres in an incredible flight which took him as far as Winnipeg. He expects that record to stand a good while—he certainly has no plans to attempt to break it.

In recent years, Marsden has also become interested in ultralight aircraft. He is the designer of the Bushmaster, which was manufactured in Alberta, and is now working on an improved



version for which he hopes to make manufacturing arrangements.

Geoffrey Kulak: An Inquiring Mind

In the aftermath of the tragic crash of the Mindbender roller coaster at West Edmonton Mall in June 1986, the Alberta minister of labor announced that a public inquiry would be held. Because much of the testimony would surely be highly technical (it was known almost from the day of the accident, which killed three persons and injured others, that a fastener failure was involved in some way), the minister wanted someone on the inquiry board who understood those sorts of things. He didn't have to look far for that

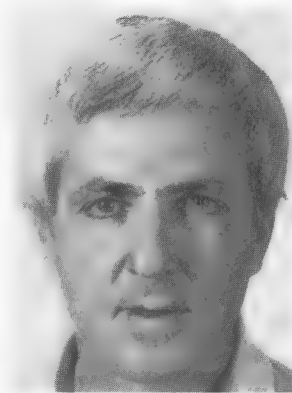
someone—just across the river to the University of Alberta,

where Geoffrey Kulak ('58 Civil), Canada's foremost expert on steel structural connections, has been a member of the department of civil engineering since 1970.

A former chairman of that department who has graduate degrees from the University of Illinois (MS) and Lehigh University (PhD), Kulak has been very active in establishing Canada's design standards for steel structures and is currently vice-chairman of the Canadian body that writes those standards. He is also a Canadian delegate to the comparable international body. (In fact, the international standards being put into place are largely modelled on the ones now existent in Canada.) Along with former U of A engineering dean Peter Adams and Hugh Krentz, director of engineering for the Canadian Institute of Steel Construction, Kulak is the author of the standard textbook on structural steel design used at all Canadian engineering schools. In 1985 he was awarded the prestigious Moisseiff Award by the American Society of Engineers for a paper he wrote with a former graduate student of his, John Dawe, who now teaches at the University of Hong Kong.

Kulak (along with lawyer Kenneth McKenzie, Q.C.) was duly appointed to the two-person Mindbender board of inquiry, and the expectation that a high degree of technical expertise would be called for was soon borne out. The immediate cause of the accident was found to be the loss of four cap screws holding a bogie wheel assembly in place on the last car of the accident train, and a great deal of evidence dealt with the factors which brought this about and caused fatigue cracks and other deficiencies in a large number of the remaining cap screws. (As a matter of interest, the board concluded emphatically that there were both design and manufacturing faults that led directly to the accident. The board was also critical of maintenance and inspection procedures, but did not link these directly to the accident.)

His involvement in the Mindbender inquiry is only part of Kulak's lengthy record of community service. He has also been very active in Edmonton arts organizations, is a former chairman of the board of the Edmonton Art Gallery, and currently chairs the board of the Edmonton Chamber Music Society—"not that I know anything about chamber music," he says. However, he finds that most arts groups can benefit from someone who takes a more structured approach to problems and management. Someone like an engineer.



continued on page 18

Applying Science to Practical Ends

■ At Hell's Gate in the Fraser River a vertical slot fishway is designed to pass 20,000 sockeye salmon per hour as the fish make their spawning run. In Canada, as in many other countries, if a hydraulic structure poses potential fish passage problems, a fishway is legally required and the Hell's Gate structure is one of more than 300 fishways now in existence in this country and several more are built each year. At the University of Alberta, Civil Engineering Professor Nallamuthu Rajaratnam is conducting research (in co-operation with C. Kapotopodis of the Freshwater Institute, Winnipeg) which is providing basic understanding of the hydraulics of the various types of fishways—pool-weir, pool-weir orifice, Denil, vertical slot—which have been developed. This information has led to some simple and effective fishway designs which have already been employed in Western Canada with excellent results.

■ In the last ten years the use of geosynthetic materials—special fabrics and sheets designed for use with soil, rock, permafrost and muskeg—has developed rapidly. Because of their widespread use in resource development and transportation facilities, geosynthetics are widely employed in Alberta, and for the last seven years faculty members from the Faculties of Engineering and Home Economics at the University of Alberta have co-operated in research which is part of the comprehensive world-wide effort to develop design standards and testing methods for use with geosynthetics. Drs. J.D. Scott and D.C. Sego, from the department of civil engineering, and fabric specialists Prof. E.A. Richards

and Dr. Nancy Kerr are jointly looking at the material properties, behavior and applications related to the four general types of geosynthetics: geotextiles (woven or non-woven, water-permeable fabrics), geomembranes (water-impermeable membranes used for lining reservoirs, canals, etc.), geogrids (open-mesh grid material used for reinforcing soil masses), and composites (fabric systems combining two or more of the preceding). The U of A's interdisciplinary program is unique as few other universities have the necessary combination of staff expertise.

■ It's hardly the ideal family car, but if you're talking fuel economy . . . An experimental vehicle designed by students in the U of A's Mechanical Engineering SAE (Society of Automotive Engineers) Club was entered in both the Shell Fuelathon in Oakville, Ontario and the SAE Supermileage Race in Marshall, Michigan last year. While a mechanical failure kept it out of the running in the Oakville contest, it redeemed itself in Michigan, finishing in fourth place. It's 1,225 miles per gallon placed it ahead of contenders from such respected engineering

institutions as McGill, Toronto, Ryerson Polytechnical, California State Northridge, and the General Motors Institute.

■ Dan Eisenstein, a U of A professor of civil engineering, has been involved in the design and construction of numerous tunnel projects around the world (including Edmonton's LRT tunnels) but he describes the technical problems encountered during his work on the recently-opened Cairo metro as "unique." Dr. Eisenstein and his research team spent two years (off and on) observing and measuring the effects below and above ground of the tunnelling and construction associated with the project. Their work made it possible to evaluate building techniques—and modify them if necessary—at an early stage in the project. (This is the "observational method of design" at which the U of A is a leader.) "Difficult ground conditions, high groundwater levels and the close presence of the mighty Nile—as well as many historic structures—made the project an awesome task," he says.

■ Inspired by a friend injured in a gymnastics accident 12 years ago, fourth-year engineering students Randy Marsden and Les Tanne are well on their way to developing a computer-aided

speech prosthesis greatly superior to anything now available. They call their speech-simulator "Cyclone," a play on the name of their friend Si Peterson, who was paralysed from the waist down and had to undergo a tracheotomy. Confined to an Edmonton hospital, he has to lip words and the simple aids—such as speak and spell matrixes—now available are of little benefit. Working long hours and incorporating a number of Peterson's suggestions, Marsden and Tanne have produced a circuit board and a digitized voice output board, activated by mouth movements, that produces speech with just a split-second delay. Attention has now turned to the software, and the students estimate that it will take another six months of concentrated effort before a prototype suited to the arm of a wheelchair or a bedside table is completed. The merit of the Cyclone project was recognized in February of this year when it placed first in the entrepreneurial design category at the Western Engineering Competition in Vancouver. It later received the social merit award and placed second at the national competition.

■ Every summer the Alberta Institute for Petroleum Industry Development attracts individuals from around the world to the University of Alberta for a two-month program. The Institute is a training program designed for personnel—particularly professionals in middle and senior management—from countries currently developing their petroleum industries. The fifth annual institute, which was held in June and July 1987, attracted participants from 21 countries.

■ As part of their efforts to improve the performance, reliability and management of the local area and long-distance inter-city telecommunications network,

The U of A entry was a top contender in Michigan.



researchers at the Alberta Telecommunications Research Centre have developed a "self-healing network." At present, an outage or cable break in a provincial or national fibre optic trunk network can take up to 12 hours to repair. The self-healing network which the ATRC researchers have invented and successfully demonstrated (on a simulation basis) is capable of automatically configuring itself, without centralized control, to reroute the information flow around the problem area. The project has now reached a "technology transfer" stage and is being considered for possible development by interested sponsors.

■ The University of Alberta's Mechanical Engineering Acoustics and Noise Unit is the only true acoustical testing facility operated by a university in Canada. Located in Edmonton's Grosvenor Industrial Park, the facility aids the commercial development of acoustical materials and systems of materials. It also assists in the development of Canadian acoustical standards and in the training of scientists and engineers in this area. One of the facilities major projects in 1987 involved an evaluation of hearing protection devices under a contract to Alberta Occupational Health and Safety.

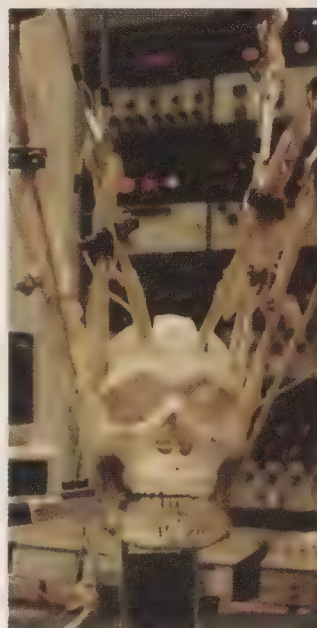
■ With assistance from the Canadian International Development Agency, the U of A has entered into a linkage agreement with the Bangladesh University of Engineering and Technology. The project is aimed at helping BUET develop expertise in energy and water resources engineering and will involve the exchange of senior professors and postgraduate scholarships for junior BUET staff members. The scholarships will assist these staff members to complete their doctoral degrees in Alberta in

programs related to energy and water resources, so that they can give leadership in these areas upon their return to Bangladesh. Another element of the agreement is the provision of 31 scholarships to support the participation of members of the Bangladesh energy community in the Alberta Summer Institute in Petroleum Industry Development.

■ Increasingly in recent years surgeons have been setting aside the scalpel in favor of the high-technology wizardry of the laser for a number of surgical procedures. Now a new generation of medical laser technology is being developed at the University of Alberta, where Dr. John Tulip is making medical lasers more versatile, less expensive and easier to use. The professor of electrical engineering and founding director of the Alberta Laser Institute has developed a new system for building CO₂ medical lasers (used in neurosurgery, gynecology and general surgery) using a hollow rigid tube to guide the laser to its destination, thus making them less cumbersome and more suited to operating room conditions. This technology has already been incorporated into a special dental laser, and Dr. Tulip is also working on a YAG (yttrium-aluminum-garnet) laser. When beamed through a simple quartz fibre optic, the new YAG laser has the power to both cut and coagulate—giving it major potential for application in neurosurgery and heart surgery.

■ The term mechanical engineering may conjure up images of motors and machineries, but more often these days mechanical engineers are concerning themselves with that most intricate of machines: the human body. One of these is the chairman of the department at the University of Alberta, Dr. Garry

Faulkner, who is conducting research in conjunction with colleagues in the Faculty of Dentistry. One of his project is related to the temporomandibular joint—the joint which connects the lower jaw to the skull. Temporomandibular-joint disorder (TMJ for short) is now recognized as a



Mechanical engineering expertise is being used to help understand TMJ.

problem that effects millions of North Americans, causing severe headaches and a variety of other distress. Dr. Faulkner is using a mechanical model of the joint to study the reaction loads against the skull and is also trying to determine if certain types of jaw formations make people more susceptible to TMJ.

■ The advent of very fast and large computers has made it possible to mathematically simulate processes at the atomic level. Professors David Lynch and Sieghard Wanke in the department of chemical engineering at the University of Alberta have recently developed an atomic model for the deactivation and regeneration of supported metal catalysts—such as are used for producing high-octane gasoline and for

reducing pollutants in automobile exhaust. The computer simulation of the changes which occur in a catalyst with use required millions of calculations and many simulations to predict the changes for different conditions. One extensive simulation, done on the Cray supercomputer in Toronto (Canada's biggest) required 38 hours of computer time—fortunately the time was donated by Cray Canada Ltd. Many shorter simulations (nevertheless, involving hours of computer time) were done on the U of A's own Amdahl computer. Because the model obtained from the simulations is in agreement with experimental observations, it is now being used to predict behavior at conditions for which no experimental data are available.

■ The computer process group in the University of Alberta's chemical engineering department now has a computer fast enough for its special needs. The group is involved in research related to expert systems, one aspect of "artificial intelligence," and is interested in developing such systems for use in process industries such as oil, gas, food processing, mineral upgrading, and chemical manufacturing. Its particular focus is real-time expert systems that obtain a significant part of their data from the process instrumentation or from the on-line database of a large process control computer—not from interaction with a human operator. A stumbling block in the past was the lack of a computer sufficiently fast to handle the input and output data in the time available. That's now been removed through the generosity of Hewlett Packard (Canada) Ltd. who recently donated an HP9000 Artificial Intelligence workstation (list price in excess of \$75,000) to assist the group in its work.

Gerald DeSorcy: An Eye on Our Energy



"It's very interesting," says Gerry DeSorcy of his work. Then, with a chuckle: "And some days it's altogether too interesting." DeSorcy ('55 Petroleum) is chairman of the Energy Resources Conservation Board, the body responsible for regulating the development of Alberta's energy resources. Formed 50 years ago in the aftermath of the tremendous waste which occurred in the rush to exploit the Turner Valley oil field, the ERCB is entrusted with ensuring that energy development takes place in a manner which maximizes the benefits to Albertans. Each year it receives as many as 15,000 development applications: each oil or gas well that is drilled, each oil or gas pipeline that is built, each oil sands project that opens must have the approval of DeSorcy's group. Often that involves public hearings, and given the high stakes that can be involved, controversy and disputes are sure to arise from time to time. That's when things can get interesting, or even too interesting.

Although he became chairman only a year ago, DeSorcy is far from being a stranger to the ERCB's day-to-day operations. He joined the Board's professional staff (then it was the Oil and Gas Conservation Board) 33 years ago and worked his way through a variety of positions (including chief gas engineer, manager of the data processing department, and manager of the gas department) prior to his 1975 appointment to the five-person board responsible for directing the work of the 750-or-so ERCB staff members and advising government. He was named vice-chairman in 1978 and chairman in 1987.

Edward Bishop: A Different Career



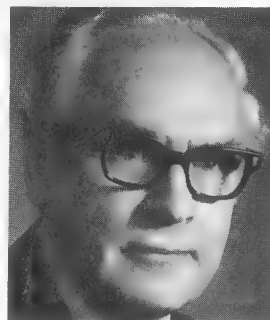
From his office on the twenty-fifth floor of the Canada Trust Tower, Edward Bishop ('34 Electrical) can view the structures of downtown Edmonton with pride at the role that he and his firm have had in their development. That involvement, however, has had little to do with engineering: the initials after Bishop's name are "QC" not "PEng." Immediately after receiving his engineering degree he entered the study of law, and the buildings at which he gazes bear witness to a long and distinguished practice of commercial and corporate law.

A fondness for mathematics had led Bishop to study engineering although his father, who had established a law practice in Edmonton in 1903, had wanted him to follow in his footsteps. "Gradually I swung over," recalls Bishop, who points out that in 1934, in the midst of the Great Depression any work was hard to find—"there was no urgency to get out and practice either engineering or law." Having some knowledge of both, Bishop describes engineering and law as more similar than might be expected at first glance: "The process is very much the same, engineering or law. You have to identify the problem, dissect it, and put it back together or create a solution."

Now retired from the day-to-day practice of law, Bishop contin-

ues to "act as a sounding board, especially for juniors" in his position as "counsel to the firm." And his son, Norman, has now taken over as the practicing Bishop in Bishop & McKenzie.

George Sinclair: A Passion for Radio



The story of a prominent career launched at a radio station is not unusual—indeed it has become a Hollywood cliché—but George Sinclair's story is a bit different . . . When Radio Station CFGP, Grande Prairie, Alberta went on the air in 1937, Sinclair ('33 Electrical, '45 MSc) was responsible for the newscasts and wrote and announced "Morning Bulletin Board." But it was the technical side of radio that was his passion: he had supervised

the station's construction and was its chief engineer until he went south in further pursuit of that passion.

Today, Canada's Sinclair Radio Laboratories and its associated companies are world leaders in radio technology and have been for many years. A Sinclair antenna originally designed for the Avro Arrow was salvaged when that project folded and was eventually installed on every diesel locomotive in Canada, on many U.S. locomotives, and on the New York subway cars. SRL designed the main antenna for the Alouette I satellite which launched Canada into the space age, and for a long time was the major supplier of concealed automotive antennas for the FBI. SRL remains the major manufacturer of commercial antennas for arctic use, and it virtually created the commercial multicoupling industry. Its design for military multicouplers is acknowledged to be the world's best and is used by the Canadian, British and Dutch Navies. Another Sinclair company, Almax Industries of Lindsay, Ontario, manufactures the world's best PZT ceramics (used in ultrasonic devices). So far the Japanese haven't caught up, and Almax ceramics are to be found in the electronic fishfinders of the Japanese fishing fleet. According to a recent MIT study, the fuel cell is the most promising replacement for fossil fuels in transportation; with a new alumina ceramic, Almax is in the forefront of world research in this area.

When he left Grande Prairie, Sinclair registered in a PhD program at Ohio State University with Dr. W.C. Everitt as his supervisor. In 1941 Everitt hired him to work on a project to design antennas for a new generation of highspeed military aircraft. That led to Sinclair's founding—with considerable assistance from Edward Jordan ('34 Electrical)—of the OSU Antenna Laboratory the following year. By the end of the War the Laboratory had 125 staff members, and for many years it was the largest research laboratory at OSU. While in Ohio, Sinclair was the first to develop a laboratory technique to measure the radar echoes from targets, and he is considered the founder of the radar reflectivity measurement industry. In 1947, Sinclair returned to Canada, accepting a faculty position at the University of Toronto, where he immediately organized Canada's first PhD program in electrical engineering and later was a co-organizer of Canada's first venture in radio astronomy. In 1950 with another Alberta graduate, Peter Yachimec ('46 Electrical), he founded Sinclair Radio Laboratories.

During the course of his career, Sinclair has received numerous honors and awards including a Guggenheim Fellowship, an honorary degree and the Distinguished Alumnus Award from Ohio State, the Julian C. Smith Medal of the Engineering Institute of Canada, the Gold Medal of the Polish Electrical Society, and a Certificate of Appreciation (its highest civilian honor) from the U.S. government.

Vic Henning: Commodore and Czar

When R. Victor Henning ('41 Mining) graduated there was a War to be fought, and he joined the Navy as an engineering officer. The War ended, but he remained in the service, and when he retired from the Navy in 1973 he had served in a variety of challenging posts, achieving the rank of commodore, and was in command of the Navy's West Coast dockyards. He could look back at an interesting and rewarding career—only he was too busy with an interesting present and future to do much looking back.



After leaving the Navy, Henning took charge of the Banff School of Advanced Management. And he left there in 1976 for an even more challenging job: commissioner of Alberta's northeast region. It was the height of the oil boom and almost overnight the tiny, remote community of Fort McMurray was being turned into a city by oilsands megaprojects. To introduce some order the Alberta government created the position of commissioner, giving him enormous powers—he could even suspend various provincial laws. Naturally there was strong reaction to giving so much power to one person, and Henning was often referred to as the "Czar of the North." However, the retired commodore's quiet, careful—and effective—way soon allayed fears, and he went on to serve nine "very interesting" years ensuring that community infrastructure didn't lag too far behind the rapid-paced development. Now again retired and living in Edmonton, Henning keeps busy with his musical interests and with occasional Canadian Executive Services Organization projects. In addition, he is a member and past president of the selection committee for the Duke of Edinburgh Award, which recognizes youth achievement.

Steve Hrudehy: Lift a Glass to His Research

The newspaper photo shows Steve Hrudehy ('70 Mechanical) in a business suit and hard hat standing at the bottom of an immense (but empty) water reservoir. In one hand he holds a 50-litre pail; in the other a small bottle. In this unusual—but very effective—manner Hrudehy, a professor of civil engineering at the University of Alberta, demonstrated parts per million (the pail relative to the reservoir) and parts per billion (the bottle . . .) in connection with his recent year-long study of Edmonton's drinking water. (The conclusion: the system is not without its problems, but the water's drinkable.)



In Edmonton it has become a rite of spring to look to Hrudehy for assurance when confronted with the city's odorous water, but Hrudehy commands a wider audience as well. His U of A group investigating anaerobic biological treatment of a variety of unconventional water contaminants is in the forefront of world research in this area. And Hrudehy, who heads the toxic and hazardous waste management committee of the Canadian Society for Civil Engineering, is widely sought after for his expert knowledge in a number of areas of public health engineering. Often this involves his expertise related to the nature and treatment of industrial (including oil sands) wastewaters and the related problem of fish tainting.

Art Price: At the Helm of Husky

"A young man in a hurry," is how the Financial Times of Canada described Art Price ('73 Mechanical) in an October 1984 feature story. Price, then just 33, had been appointed president of Husky Oil in April of that year, only 11 years after his graduation from the University of Alberta.



After leaving the U of A, Price had gone to work for Nova Corp. in that company's project management and construction section. Those were heady days of rapid expansion in Alberta's natural gas exploration-production industry and Price, who had gained plenty of hands-on management experience on his family's farm near Calgary, moved up rapidly in Nova's ranks. In 1979 when Nova acquired 68 per cent of Husky from the controlling American shareholders, Price was given the opportunity to move to Husky. He decided to "give that a shot" and by 1982 was the company's executive vice-president.

In 1984 came the promotion to president and CEO of both Husky Oil Ltd. and Husky Oil Operations Ltd. and appointment to the Husky Oil Ltd. board of directors. (He is also a director of IPSCO Ltd., Regina.) With Price as president and the Nova backing, Husky has more than held its own during the recent lean years in the oilpatch, and now, with an added infusion of capital from Hong Kong, is looking to become an even bigger player in the Canadian oil industry.

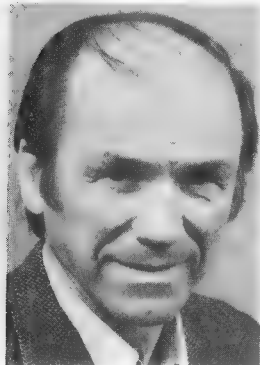
Mary Ann Crichton: A Head for Business

Although she trained as a chemical engineer (attracted equally by concern for the environment and the lure of the oilpatch) and spent five years as a project engineer with Shell Oil, the wheeling and dealing world of business is Mary Ann Crichton's first love. Crichton ('77 Chemical) is willing to confide that she managed her first "leverage buy-out" when she was eight (her brother's share of their live bait business), and while growing up in Northern Ontario she always had a business or two on the go. After leaving Shell, she went to the Far East where she established a business exporting art to Los Angeles. One thing led to another, and soon she had a company engaged in transferring technology to China via Hong Kong. Returning to Canada she gained an MBA at Western Ontario while running a business full-time.



Now living in Toronto and manager, business development for Federal Pioneer, Crichton is firmly entrenched in the merchant-banking world of mergers and acquisitions, joint ventures, technology licensing, product development, and strategic planning. But she hasn't lost sight of her engineering background. "It's a method of problem solving, and it provides good discipline," she says. It's also a good base for the management of technology, and that, along with the management of change, is something she faces daily as part of the corporate team attempting to transform Federal Pioneer, a manufacturer of electrical distribution equipment and transformers, into a world-class Canadian company.

Anatol Roshko: Most Likely to Succeed



"The problem of turbulence has been around a long time and attracted various interested parties. Mathematicians and physicists have come and gone, but engineers have to stick it out." So read the bulletin announcing the visit to the U of A of a distinguished lecturer who was received warmly—not only because of his impressive credentials, but because Anatol Roshko ('45 Eng Physics) was coming home.

If his class had taken a vote on the member most likely to succeed, Roshko surely would have won hands down. "Everything he touched turned to gold," recalls Professor Emeritus George Ford. Roshko could win a campus-wide essay contest as easily as an engineering prize, he was president of his class, president of the ESS . . . All too often such early promise is not realized, but Roshko has gone on to gain the success expected of him. He is the Von Karman Professor of Aeronautics and Acting Director of the Graduate Aeronautics Laboratories at the California Institute of Technology, and is held in high esteem throughout the engineering world for his expertise in a number of areas of fluid mechanics, including turbulent shear flow and the effects of winds and ocean currents on structures. A consultant to such industrial giants as McDonnell Douglas, Rockwell International and GM, he received the Fluid Dynamics Prize of the American Physical Society in 1987.

James Bromley: An Aptitude for Invention



It was an aptitude for invention that took James Bromley ('43 Electrical) from a position as electrical supervisor at GE's Schenectady, N.Y. operation to a career in research and development that included 32 years with Monsanto, from which he recently retired as technical director. Along the way he personally accumulated 25 U.S. patents, and his milestone contributions include the method used to create yarns which "bulk"—making stretch fabrics possible—and the world's first anti-static nylon carpeting. And he gave the world AstroTurf.

From his Pensacola, Florida home, Bromley recently recalled his involvement with the artificial turf. It began, he says, with a U.S. Army study that found recruits who had grown up on concrete city playgrounds to be more timid than their country counterparts who had frolicked on grass. Reacting to this, the Ford Foundation came looking for a grass-like surface which could be used to soften school playgrounds. With a bit of technical wizardry, Bromley was able to give them something suitable, and it was actually installed on one school playground—the one for which the Ford Foundation footed the bill. Schools had other priorities for their money. That might have been that, but then the world's first domed stadium was built, and it was discovered that grass wouldn't grow in it. Bromley's grass-substitute got a new

lease on life, and when the Houston Astrodome opened the world was introduced to AstroTurf.

Garry Lindberg: Space is His Frontier



As an engineer whose specialty is aeronautics, Garry Lindberg ('60 Engineering Physics) has a certain fondness for aircraft. But enough is enough: there came a time just a few years back when he was beginning to feel that half of his life was being spent in the air. That was when, as Canada's manager of the Canadarm project, he was regularly crossing the continent between Ottawa and Toronto and the NASA establishment at Houston. These days, he still spends a fair bit of time in the air, but his new responsibilities as executive director of the National Research

Council's Space Division do not entail the same hectic criss-crossing of the continent.

Lindberg's interest in aircraft and flight began at the University of Alberta, where he chose the aeronautics option in the engineering physics program as an undergraduate. After graduation and further studies at Cambridge University (from which he has a PhD in mechanics) he accepted a position at Canada's National Aeronautics Establishment. There he initially got involved in analytical work related to aircraft structure and did pioneering research in the area of finite elements and computer techniques for better and more detailed analysis of structure.

Lindberg has always had a delightfully original mind, says George Ford, professor emeritus and former dean of engineering at the University. Ford worked closely with Lindberg when he (Ford) chaired the NRC's Associate Committee on Aircraft Structure and Lindberg was secretary. Ford recalls one of the space director's messier experiments: he had an airgun manufactured and fired the bodies of six-or ten-pound chickens at aircraft to simulate what happens when an airplane hits a bird in flight. It made quite a bit of a mess, but he was able to mathematically show that the penetration of the bird is proportional to the cube of the velocity.

Lindberg also had an early interest in space, and as one of the pioneers of Canada's involvement in space he was chosen to be the first manager of the National Research Council's Canadarm project in 1976. Later, as director of the National Aeronautics Establishment, he oversaw the creation of the Canadian Astronaut Program. His current position came into being in 1986 when the NRC established the Space Division to consolidate the management of the various elements of Canada's involvement in space. As the director of the division, Lindberg retains responsibility for the astronaut program and will oversee the NRC's ongoing space sciences research program. His division also co-ordinates Canada's involvement in the planned NASA Space Station, for which Canada is to provide the Mobile Servicing Centre—featuring a new generation of robotics technology and control systems, the MSC will be a key element in the construction and maintenance of the Space Station. While much of his division's work is being done in concert with NASA, Lindberg points out that it is not entirely so; the division also has joint projects with European nations and Japan, even the Soviet Union.

Ed Hauptmann: Sorting Herring by Sex

All things considered, Ed Hauptmann ('60 Mechanical) was pleased with his 1975 trip to Ottawa: it was an honor to receive an Engineering Design Award, and the Governor-General of the day, Jules Leger, who presented the prize, seemed genuinely interested in the innovative bit of engineering that had led to the award. But did the Ottawa media have to keep referring to the piece of equipment which was the product of that innovation as a "sex machine"?

Hauptmann, a member of the U of A's first graduating class in mechanical engineering, is a professor of mechanical engineering at UBC. In 1975 he won a national design prize for his Automatic Herring Sex-Sorter, a neat bit of engineering which permits optimum utilization of B.C.'s limited herring catch through the separation of male herring from roe-bearing females at processing plants—the males are sent for immediate filleting; the females are "firmed" and their roe removed to supply the Japanese market. Because there is no visible difference between the two sexes of herring, prior to Hauptmann's development of the sex-sorter (which can sense the slightly greater transparency of the roe-bearing female) the entire catch was "firmed" in brine and the flesh thereby rendered unsuitable for human consumption.

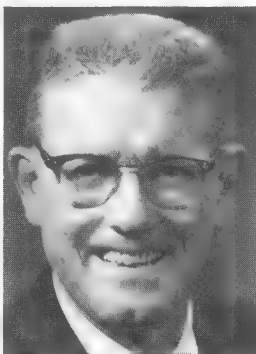


Bruce Wholey: Corporate V-P at H-P

During almost 40 years with the Hewlett-Packard Company, Bruce Wholey ('42 Engineering Physics) was, one way or another, involved in many of H-P's major developments. But he claims no credit for the invention that made the engineer's slide rule obsolete, the hand held calculator. "I just sat across the aisle from Hewlett while he was inventing it," says Wholey over the phone from the Los Altos Hills, where he is retired and enjoying California life.

California is where Wholey headed after graduation. He earned a master's degree from Stanford and then went on to Harvard's Radio Research Laboratory. When the War ended the microwave countermeasures project in which he was involved was transferred to Hewlett-Packard, and December 1945 found him back on the West Coast in the company's research and development laboratory. There he helped develop the first of the modern microwave signal generators and got involved in spectrum analysis—now a major H-P business segment. When a new division for engineering and manufacturing microwave instruments, signal generators and waveguide devices was formed in 1960, Wholey was named general manager. In 1963 he went in the same capacity to the company's Sanborn (now Waltham) Division in Massachusetts. The emphasis there was on medical electronics.

In 1969 Wholey returned to H-P's corporate headquarters in Palo Alto, California. Prior to his retirement in 1984 he had become vice-president for corporate services and was responsible for overseeing the company's facility planning and construction



program, corporate information systems, corporate administrative services, corporate security, corporate aviation department and corporate industrial design.

Harvie Andre: An Engineer in the Cabinet

Politicians have a reputation for not using one word when two can be found, but when Harvie Andre ('62 Chemical, '66 PhD) is asked how he came to be involved in politics, the answer is succinct: "Just doing my thing as a citizen."

After earning his University of Alberta degree Andre enrolled at the California Institute of Technology, gained a master's degree, and went on to receive his doctorate in 1966. He then taught chemical engineering at the University of Calgary for six years before "doing his thing as a citizen" brought about a sharp turn in his career. Previously Andre had maintained an active, but behind the scenes, involvement in politics and had also served in a number of volunteer positions—as a director of the Clifford E. Lee Foundation, as a vice-president of the Social Planning Council of Calgary, as chairman of the Calgary section of the Chemical Institute of Canada—but in 1972 "a whole pile of circumstances" made him a Conservative candidate in the federal general election. He was successful in gaining a Commons seat and has since been re-elected four times. In 1984 he was sworn in as minister of supply and services. Since then he has served as the associate minister of defence and is currently minister of consumer and corporate affairs and the minister responsible for Canada Post.

Andre has found his engineering background of definite value in the world of partisan politics and government: "It provides you with an approach to problems, and it makes you technology conscious." (In respect to the latter, he provides a current instance where his background in technology is useful: an element of the consumer and corporate affairs portfolio is the Patent Act; a major current initiative is the automating of the Patent Office to make it more accessible). At the same time Andre, a chuckle evident in his voice, says that his engineering training isn't always a good thing: "As an engineer you are taught to assemble facts and base decisions on those facts—sometimes that can be a detriment in politics."

Pursuing that line of thought more seriously, Andre says that in engineering there is a much greater opportunity to take hold of a problem and bring it to a point of completion. The work of government, he says is "much more diffuse, taking place as part of a continuum. Decisions come from a consensus, an amalgam. There really isn't much opportunity for one individual to make a decision and take it through to completion." He could well be thinking of his relationship to the Post Office, which he describes as a great challenge and an enormously difficult thing to manage politically. Because Canada Post is a crown corporation, Andre is a step removed from its direct management; at the same time it is a perennial political hot potato. But then, nobody said that "doing your thing as a citizen" would always be easy.

Andre was one of two Alberta engineering grads appointed to the federal cabinet in 1984; that same year Tom Siddon ('63 Mechanical) was given the Science and Technology portfolio. He is now minister of fisheries and oceans.



The Wilson Era



By Dr. George Ford

*Excerpted from
Dr. Ford's soon-
to-be-released
history of the
Faculty of
Engineering at
the University
of Alberta.*

Opposite page: This photograph, taken in the year that Wilson became dean, shows Dr. Karl Clark at work on some of his pioneering research related to Alberta's oil sands.

The return of the service personnel in the autumn of 1919 swamped the young university. Never had the place been so bustling and crowded! The residences were jam-packed, classrooms overflowed and a new era dawned at the University of Alberta. With the crowds came the influenza epidemic, which took the lives of many students as well as the life of Professor Edwards. (Editor's Note: W. Muir Edwards, an instructor in mathematics and civil engineering, was one of the five professors on President Tory's staff when the University of Alberta opened in 1908.) Edwards served as admissions officer of the University residences, then used as a hospital.

Following the death of Edwards, arrangements were made with Mr. A.W. (Bert) Haddow, city engineer of Edmonton, to assume Edward's teaching duties until a suitable replacement could be found. Although Bert Haddow served the Faculty for a short time, his interest remained throughout his life. He was the fifth staff member to serve as president of the Association of Professional Engineers (1936).

The young men and women who served their country during World War I received special benefits which permitted them to complete their high school requirements and enter university. Facilities in engineering were put to the test and the work of the staff sky-rocketed, new staff were acquired. One of the new appointments was that of Robert Starr Leigh Wilson as the replacement for Professor Edwards.

Wilson was born in Lunenburg, Nova Scotia in 1885. He was awarded his BSc degree in civil engineering in 1911, with great distinction, from McGill University. He spent the next eight years in engineering practice in the construction business.

In 1919 Wilson came to the University as an expert in railway construction. He was professor of civil and municipal engineering and became dean of the Faculty in 1929. He held these positions until his early retirement in 1946. During his years at the University, Wilson was a tower of strength not only in the Faculty, but within the University as well. During his time as dean, student enrolment steadily increased. Wilson was particularly effective in his dealings with students. The graduates of his period recall the sympathet-



Robert Starr Leigh Wilson
Dean of Applied Science, 1929-1946

ic and patient consideration he gave to their individual problems.

In the early years of his career at the University, Wilson exerted a profoundly unifying force on the engineering profession in the province. He was a prime mover in the passing of the Engineering Profession Act in 1920. He was a charter member and served as the first registrar of the Association of Professional Engineers from 1922 to 1926. For many years, he served as member of council and chairman of the board of examiners. In 1928, he was elected president of the Association.

Without question, his greatest contribution to the Faculty came when the World War II veterans attended the University. Over a period of two years, he organized the Faculty to accommodate a threefold increase in student registration. The students sought his counsel for their personal, as well as their academic problems. Many student veterans have acknowledged that without his advice and stimulation, they would have abandoned their University careers. His greatest tribute is the success of so many of the student veterans, now spread over Canada.

Those who knew him learned a deep-rooted concept of the dignity and worth of mankind.

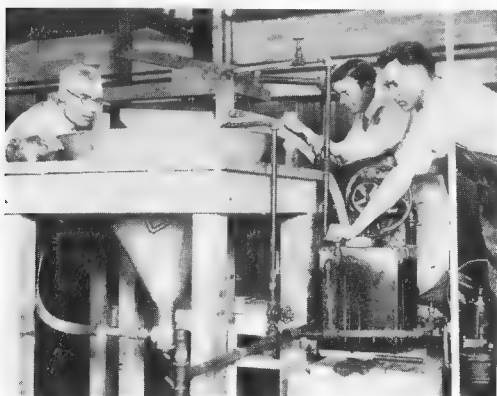
Wilson was dearly loved. Although his lectures were long out-of-date, his students, by a fixed schedule, made certain that half the class was always present when he lectured. He gave two courses—CE 74, Land Transportation and CE 77, Construction Engineering. To this day, no one has the slightest idea what was supposed to be in those courses.

But all can recall the stories of the building of the Ontario Temiskaming Railway, with the Irish foreman, Big Red McMartin "with hands as big as hams." Wilson was a raconteur par excellence.

Whenever he attempted to give a serious lecture, one of the students would innocently ask a question about the Ontario railway—Wilson would lean back in his chair, and reach into his vest pocket for his cigarette holder. We were not cancer conscious in those days, and we would "roll our own," relax and hear another episode of Big Red. The only trouble was . . . exam time!

Dean Wilson thought he had covered certain material, but all we knew was the depth of the snow on the Ontario-Quebec border, the suffering of the sleigh dogs, and Big Red and his crew. The dean could never understand why performance in his courses was so miserable compared with other courses. He solved the problem by giving out 20 questions at the start of each course. He chose five of them for the final examination—at least now there was a chance.

In 1946, Dean Wilson returned to Victoria, where many of the staff visited him to keep him abreast of developments in the Faculty. From the day he left until his death at the age of 82, he never again set foot on campus. ■



Survey Class, 1910. The University's first class in civil engineering graduated in 1913 after a five year course. The hatless gentlemen in the back row are Professor Edwards and the mustachioed Henry Marshall Tory.

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Untitled Sculpture
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Robert Cooke '62 BSc(Eng)

Robert Cooke spent the better part of ten years aboard ships mining the deep ocean floor for manganese nodules, a source of nickel, copper and cobalt. "It was a very intense period of my life," says the chemical engineering graduate who now makes his home in

Issaquah, Washington. He compares it to going to the moon.

After such a consuming work experience, he found it difficult to return to an ordinary job. Instead, when the international nickel market became depressed, he left his job as exploration manager for INCO and

then seriously turned his attention to a life-long hobby: art. Since 1980 Cooke has been a full-time sculptor. "I knew that if I wanted to do it right, I had to do it full-time," he says.

Cooke's art combines his scientific background (he also has a degree in oceanography from the University of Rhode Island) and his love for animals. Much of his work has a wildlife theme, reflecting both his West Coast locale and his experiences trapping in Alberta and later working in the Arctic. "I try to capture an important moment in the life of the animal," he says.

Cooke was born in Edmonton and examples of his work can be found in his native city. In 1985 he was commissioned to design and construct much of the sealife sculpture for West Edmonton Mall's submarine ride. A more recent work, also commissioned by the Triple Five Corporation and on display in its new Eaton Centre, is a seven-foot high bronze sculpture of a prospector and his burro. The prospector's mouth hangs open in wonderment, as if to say: "The old town sure has grown."

Class Notes

'24

Lesley Heathcote, BA, '28 MA, retired as director of libraries at Montana State U in 1970, "...glad to be out of the rat race of computerization." Her acre of waterfront on Lake Washington, east of Seattle, keeps her busy and healthy. "It's a friendly neighborhood... Lots of reading; lots of discussion."

'32

Vladimir Ignatieff, MSc, is a former deputy director of the land and water division of FAO. Before his retirement in 1969 he supervised one third of the total field work of FAO in some 45 countries. Before joining the United Nations Food and Agriculture Organization in 1946, he had been loaned by the Canadian army to the British to lead the investigation of the German industrial establishment and chemical warfare establishment, he found a variety of nerve gas unknown to the Allies.

'34

James A. McCoubrey, BSc, writes that "over the years I have noted that we of the '30's are not the best of communicators, as evidenced by items in the *New Trail*; yet many of us were reasonably successful at communicating. Now as our numbers thin down we wonder who is left to communicate with of the old guard, so we tend to confine communications to children, grandchildren and friends that shared our experience in the workplace."

But he says none of this stops him from looking at the alumni notes from his years of interest ('30 to '35) nor does it deter visits to the alumni office seeking "lost trails" when in Edmonton.

'36

Maxwell P. Martyn, MSc, '34 BSc(Eng), is a retired RCAF Air Vice Marshall. In 1941, while stationed at Halifax, he as called upon to do Jimmy Cagney's flying in the shooting of the feature film *Captains of the Clouds*. "Our friends (the movie people) were horrified to learn, once we were airborne that we were fully armed with loaded guns and anti-submarine depth charges. This was necessary so that if any anti-submarine incident occurred we could stop the movie work and go 'operational' immediately."

Edward Jordan, MSc, '34 BSc(Eng), emeritus department head and emeritus professor of electrical and computer engineering at the U of Illinois, has been selected to receive the George Sinclair Award of the ElectroScience Laboratory at Ohio State U. The award named for U of A graduate George Sinclair who founded the Laboratory recognizes outstanding career contributions by persons associated with the Laboratory.

'37

Arthur Allen, MA, '31 BA, writes from Comox, B.C. to express his interest in the *New Trail* issue celebrating the Medical Faculty's 75th

Anniversary. One of his recollections is of being admitted to the University Hospital (then called Strathcona Hospital) in 1914 at the age of seven after breaking an arm. He was taken there by a doctor driving a horse and buggy and was kept in hospital for a month.

'38

Elizabeth Cypris (Gerwin), MA, '37 BA, is now retired and living in Vancouver after a varied career, which included secretarial positions in New York at Union Theological Seminary and at Teachers College, Columbia U, where she earned an MEd in music. While living in Morgantown, West Virginia she taught part-time at the U of West Virginia in a division of the School of Music

and in the Department of English.

'44

Charles F. Ripley, BSc(Eng), of Victoria has been presented the R.F. Legget Award, one of Canada's highest geotechnical awards. He is a founder and past-president of Kohn Leonoff Ltd.

Ralph M. Duncan, DDS, and his wife have recently built a new home on the shore of Shawnigan Lake on Vancouver Island. "We've built ample areas for workshops and craft rooms, so both of us keep enjoyably busy." He also keeps busy gardening and landscaping—"although the deer frustrate us by munching on a number of buds and blossoms" — and is sharpening his musical skills as the organist

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Editor:

In a recent issue of *New Trail*, there was mention of a small garden party being held on the lawn in front of Corbett Hall. And it suddenly brought back a recollection from years past.

During the summer of 1929 a new school was being built at the end of 82 Avenue, on land well west of 112 Street. The northern section of the building was to be a Normal School for the training of student teachers; and the south rooms housed grades one to eight in what was designated the Normal Practice School. I joined the Grade Five class there when the school opened that fall.

And that's where my recollection gelled. In between 112 Street and the new building there was a small quarry. Water in the bottom of the quarry housed frogs and tadpoles for our entertainment at recess. And in the winter pieces of corrugated cardboard served beautifully for tobogganing down the sloping sides of the quarry.

Eventually the wasteland was filled, cultivated and landscaped—ready for that small garden party!

Audrey Ames (Ladler), '42 BA, '72 BLS Medicine Hat, Alberta

in the local United Church.

'45

Michael R. Bevan, BSc(Ag), has been elected president of the St. Lucian Hoteliers and Tourist Association.

'48

Albert S. Knowler, BComm, recently retired as the U of A's comptroller and is now serving as director of development and alumni affairs at St. Joseph's College on campus.

'49

Gordon A. Groves, MSc, '46

BSc(Pharm), is enjoying consulting in the area of cutaneous photobiology now that he is retired from the department of pharmacy at the U of Queensland after 21 years. From 1962 to 1965 he was head of the New Zealand School of Pharmacy.

Ernest C. Shortcliffe, MD, '41 BA, and **Elizabeth Shortcliffe (Rankin)**, '40 BA, '42 BEd, are retired and enjoying life in the small college (Colgate) town of Hamilton, New York.

'50

Patricia J. Sheehan (Seldon), BSc(HEC), has moved to Summerland, B.C. and is

enjoying golfing, curling and volunteer work now that she has retired from her position with Alberta Agriculture.

F. Scott Sherriff, BSc(Eng), is retired and living in Squamish, B.C.

'51

Donald C. Brinton, BSc(Ag), has been appointed president and CEO of CanWest Broadcasting Ltd. which holds controlling interest in television stations in Manitoba, Saskatchewan and B.C.

'53

Eric G. Coward, DDS, '49 BSc,

is retired in Nanaimo, B.C.

'55

Lucy G. Greene (Seneshen), BA, who earned an MBA degree at McMaster U in 1976, is the first female vice-president in the history of Sun Life Insurance Company of Canada.

Dona M. Erb (German), BEd, is lead scientist at the Mitre Corporation's Houston, Texas site which supports NASA's Johnson Space Center. Dona recently presented a paper to the American Institute of Aeronautics and Astronautics on the planned use of new technologies, such as hypermedia and knowledge based systems, to train astronauts onboard the International Space Station.

R. Bryan Erb, MSc, '52 BSc(Eng), has joined the National Research Council of Canada as assistant manager of the Canadian Space Station Program. The International Space Station includes participation from the US, Japan and the European Space Consortium as well as from Canada. As Canadian liaison to NASA, Bryan has offices at the Johnson Space Center in Houston and at NASA Headquarters in the Washington, D.C. area.

'56

A. James Hudson, BEd, whose field of study is biblical history and culture, has recently returned to Idaho where he did extensive research to produce the script for a multi-media production on Ancient Egypt and taught at the Jerusalem Center for Near Eastern Studies. **S. Ross Gould**, BSc(Ag), '79 MAg, lives in St. Albert, Alberta. He is head of Alberta Agriculture's animal management section in the beef cattle and sheep branch.

'57

Anna Marie Colton, BEd, lives with 25 other nuns of the Ursaline in a convent in Windsor, Ontario, on the banks of the Detroit River. A retired Alberta schoolteacher, she does volunteer work at a Lodge and her convent is associated with a residential and day school for children with learning disabilities.

In Memoriam

The Alumni Association extends its condolences to the families and friends of the following:

William Edward Simpson, '18 LLB April 1988/Edmonton

Sibyl Florence McIntyre

(Sprung), '21 BA June 1987

Pauline Ulva Chiswell (Cain),

'22 BSc September 1987

Alice Lafferty (Swanson), '22

BSc(Pharm) February 1988/

Clinton, Iowa

Ivy Snow Wilson, '22 BA

November 1986/Victoria, B.C.

Ruth Burke (MacLennan),

'23 BA January 1988

James McCorry, '24 BA, '26 LLB

April 1988

Charles Emmett Ruddy '24 BA

October 1987

Reva Marie Willis (Studholme),

'25 BA January 1988/Calgary

Marjorie Fraser Revell (Weir),

'27 BSc, '34 MSc December 1987/

Edmonton

William John Davies,

'27 BComm December 1987/

Red Deer, Alberta

Melvin John Victor Downey,

'28 BA, '42 BEd 1988/Calgary

Thomas Douglas Stanley, '29

BSc, '32 BSc(Eng) October 1987

William Ogden Parlee, '30 BA,

'32 LLB February 1988/Edmonton

Reuben Edwin Haugen,

'31 BSc(Ag) January 1988/

Victoria, B.C.

William Harold Poole, '32 BA,

'34 MA March 1988

Grant McAllen Olsen, '34 DDS

March 1988/Edmonton

David Bastedo Coutts, '35 BA

February 1988/Calgary

Paul Joseph Connelly, '36 BA

March 1988/Edmonton

Charles Campbell, '36 BA

November 1987

Ottomar Friedrich Cypris,

'38 BA, '41 MA, '51 BDiv

July 1986/Vancouver, B.C.

Frederick Wynne, '39 MD

July 1987

Albert Raymond Swann,

'39 BA, '40 LLB January 1988/

Vancouver, B.C.

Floyd Grove Pritchard,

'41 Dip(Pharm) February 1988/

Calgary

Frederick John Leslie Miller,

'41 BSc January 1988/Trail, B.C.

Ann Veronica Thomas (Davies),

'42 BA, '45 BEd May 1987/

Birmingham, England

Ernest Ray Poulsen, '43 MD

January 1988/Lethbridge, Alberta

Clifford Neil Grant Carmichael,

'44 Dip(Pharm) April 1988/

Saanichton, B.C.

Elmer Bradley Souch, '45 BEd,

'50 MEd February 1988/Edmonton

Richard Joseph Rousseau, '48

BSc(Eng) February 1988

Flora Greenhalgh, '48 BA

January 1987

Arni Sigurd Halldorson,

'50 BSc(Eng) February 1987/

Qualicum Beach, B.C.

John Richard Smith, '49 BA,

'50 LLB 1988

Benjamin Gold Halbert,

'50 BEd January 1988

Esbern Hans Dresen, '51 BSc,

'53 DDS January 1987

Virgil Herman Korth, '51 BSc,

'53 MD December 1987/New

Brunswick

James Douglas Brown, '52 BEd

February 1988/Vancouver, B.C.

Nils Harold Anderson, '53 BEd

February 1988

Ethel Margaret White, '55 BEd

September 1987

Curtis Bishop Hansford, '55

BSc(Eng) April 1988/Edmonton

Beulah Alberta Hinton, '58 BEd,

'70 BA January 1988/Edmonton

'60

William G. Bach, MD, is medical director of the Valley Institute of Psychiatry in Owensboro, Kentucky.

'61

Larry S. Witten, LLB, '58 BA, was recently appointed a judge of the Provincial Court of Alberta.

'62

Richard G. Bennett, BComm, was appointed to the newly-created position of vice-president (regional services) for the University of Alberta Hospitals earlier this year.

Annette Potvin, BEd, is busy conducting bible study course and producing associated guide books. Sister Potvin writes that one of her courses is reaching 15 parishes in the Diocese of St. Paul, Alberta and another 17 parishes as far east as Ontario.

'63

Elizaveta M. Lucich, BEd, of Edmonton reports that she is writing, painting and travelling. **Marvin R. Fyten, BEd**, who previously served a number of school districts in Alberta and the Yukon as superintendent of education, is now director of education for the Little Red River Board of Education, High Level, Alberta.

Tetsuo Aoki, MEd, '49 BEd, chairman of the department of secondary education at the U of A until his retirement in 1985, recently received an honorary degree from the U of Lethbridge.

Bernard L. Nehring, BSc, spent the year 1986-87 as an international teaching exchange fellow of the Ontario Ministry of Education, teaching at Hilda Gymnasium, Koblenz, West Germany. Prior to leaving Europe, Bernard, who holds the rank of Lt. Colonel in the Canadian Reserves, turned over command of the Lincoln and Welland Regiment, Canada's oldest continuing infantry regiment. He has now returned to Niagara Falls.

'65

Marion J. Morton (Nicholls), BEd, '79 BA, took early retirement from teaching in 1983 and spent two years working as a social counsellor. Widowed in 1983, she is now remarried and

has turned her hand to free-lance writing under the name Marnie Harris.

'66

Mark L. Burggren, BSc(Eng), and **Carolyn H. Burggren (Johanson)**, '65 BSc, now live in Auburn, Washington where he is the research and development group leader for the personal care products division of the Weyerhaeuser Company.

Genevieve M. Cusolito, Dip(Nu), has no trouble keeping busy. She reports that she is a homemaker, golfer, instrument rated pilot, keyboard player and mother of a daughter who is a highschool senior.

R. Garth McBride, MD, has been named a clinical group director in the Global Medical Direction Group for the Merrell Dow Research Institute, Cincinnati. Previously medical director for Western Clinic, a large group practice in Tacoma, Washington, in his new position he will be responsible for co-ordinating new drug development programs in the clinical setting.

Kenneth O. Dahl, BEd, '74 Dip(Ed), has recently returned from a teaching assignment in Monrovia, Liberia, West Africa. **J. Alan George, MSc**, '64 BSc, has been appointed vice-president academic and provost for a five-year term at the U of Waterloo. A former dean of mathematics at Waterloo he spent the last two years in the U.S.A. working on a major computer research project jointly sponsored by the Oak Ridge National Laboratory and the U of Tennessee in Knoxville.

'67

Craig Karpilow, BSc, medical director of Seattle's Queen Anne Medical Centre for the past two years, will now also serve as director of the Travelers Medical and Immunization Clinic of Seattle. Active in the American Occupational Medical Association, he has been nominated to chair that body's international occupational medicine section.

W. Alan Bell, MEd, '53 BA, '55 BEd, and **Alice J. Bell (McGirr)**, '63 BEd, both retired from their teaching positions with the Edmonton Public School Board last year after 65 years of combined service. He was last

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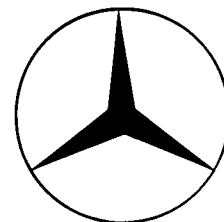
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at Alex Taylor; she at Kensington. They report they seem busier than when they were teaching. His involvements include chairing the board of Grace United Church and serving as a "clown" with the Shriners. Alice continues to be active with the church and Delta Gamma Kappa. They have also been catching up on travelling including a trip to the Orient in connection with the World Council for Curriculum and Instruction in 1986.

Are You Unemployed?

Do you require assistance in making yourself more saleable in the competitive job market? If you do and you are a University of Alberta graduate, plan to attend one or both of the **Alumni Employment Workshops** scheduled for **Wednesday, August 24, 1988** on campus.

These workshops will be conducted by personnel from the University's Career and Placement Services.

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Job Search/Job Interview Workshops

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- Analyze the steps in the job search process.
- Learn how to research prospective employers.
- Apply effective job interview skills.
- Prepare for "typical" interview questions.

Cost for each workshop is \$10 or \$15 for both. If you are an unemployed alumnus, register (before August 19) by contacting:

Office of Alumni Affairs
430 Athabasca Hall
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Edmonton, T6G 2E8
(Telephone 432-3224)

'69

A. James Gurnett, BA, is the provincial party president for the Alberta New Democrats. The principal at Blueberry Creek School, he lives in Spirit River, Alberta.

Jane C. Little (Everall), BA, and her husband and three children are enjoying their relocation to Penticton, where she is a homemaker at present.

'70

Barbara Kobsar (Bellamy), BSc(HEC), '71 Dip(Ed), has collaborated with her friend and neighbor in Walnut Creek, California to produce *A Foreign Affair: An Adventure in Home Cooking*. The book which sells for \$16 in Canada was two years in the making. It is entirely hand printed and magnificently illustrated by Susan Jackson. It is available through Cottage Kitchen Publishing, P.O. Box 4551, Edmonton, T6E 5G4.

Peter M. Gresshoff, BSc, is now at the U of Tennessee in Knoxville, where he has taken up the permanent appointment of the endowed Racheff Chair of Excellence in Plant Molecular Genetics and plans to continue with the genetic analysis of the legume nodulation functions.

"The University has established a research center, presently supported by 16 positions paid through the Chair of Excellence endowment program, so we have little excuse not to achieve." **Harry Truderung, BSc(Eng)**, has been appointed general manager of AGT Business Systems. **Andrew J. Oliver, PhD**, is manager, technical services at the Uranium Conversion plant of Eldorado Resources in Port Hope, Ontario.

'71

Dennis Boettger, MD, '67 BSc(Pharm), has co-authored and produced a board game called *The Olympiks*. The game, gives participants a taste of the vagueries of amateur sport as they "go for the Gold." The game had its beginning when he told one of his patients, Margo Kennedy, to "do something, invent a game, but do something," when she was feeling glum following knee surgery. Having spent four years of practicing medicine as a missionary in Ethiopia, he has expressed the intent to use money raised through the game

to support charities such as the Leprosy Mission Canada. The game can be ordered from his company, Rhema Re-Creation Ltd. Box 632, McLennan, Alberta, T0H 2L0.

Peter K. Chiang, PhD, '71 MSc, now heads the department of applied biochemistry at Walter Reed Army Institute of Research in Washington, D.C.

Sandra Heath, BA, lives in Vancouver, B.C., where she is manager, human resources for Deloitte Haskins and Sells.

'72

Brian J. McLeod, BComm, will be responsible for marketing of product's from Canada's first medium density fibreboard plant as manager, MDF marketing for Blue Ridge Lumber, the wholly-owned forest products subsidiary of Alberta Energy Company Ltd.

William Petryk, BComm, is senior accountant for Telepanel Inc., Markham, Ontario.

John P. Broschak, BComm, has been named director, administration and human resources by Alberta Wheat Pool.

Jacques Dubé, MEd, is on assignment with the University of Education of Honduras, where he is revising curriculum and involved in teacher training.

'73

C. Gordon Wilson, BComm, has been appointed president of Richfield Properties Ltd., a Western Canadian real estate development and management company.

Brian E. Leroy, DDS, has returned to Edmonton after spending 15 years in Fairview, Alberta. Now retired from active general practice, he is concentrating on administrative duties as associate registrar of the Alberta Dental Association.

Anna Berghout (Spronk), BEd, lives in Nepean, Ontario where she is a homemaker and mother of four children.

Keith Degenhardt, MSc, '71 BSc(Ag), and **Terry Degenhardt (Burpee), BSc(Ag)**, are farming near Hughenden, Alberta.

'75

John J. Jackson, PhD, is the author of *Bermuda*, published this year in Newton Abbot, England by David and Charles and in New York by Hippocrene Books.

Myron M. Pyzyk, BSc, and **Irene Pyzyk (Kuska), '71 BA, '72 Dip(Ed)**, are currently in Scotland where their second son was born recently. Their homebase is Toronto, where he is employed by Astra Canada. At present he is on a one-year assignment as senior clinical scientist at Astra Pharmaceutical's Clinical research unit in Edinburgh.

Christine J. Feniak, BSc(HEC), became senior curator, historic resource conservation for the western region of Environment Canada-Parks last year. In her new job she is involved in exhibit development, providing historically accurate reproductions for interpretive programs, and managing her regions historic object and reproduction collection.

'76

Harold G. Gustafson, BA, is director of the Gramado, Brazil Theological Seminary and president of the Evangelical Theological Training Association in Brazil, which is currently setting up an accrediting association.

Alexander L. Darling, MEd, registrar and director of institutional analysis at McMaster U, has been elected a fellow of King's College London. Up to six fellows are elected annually from among the College's staff, former staff or students who have achieved eminence in academic or public life.

Johanna Hildebrand (Kooy), BEd, now lives in Fredricton, New Brunswick, where her husband is a professor of civil engineering at U of New Brunswick. She keeps busy with her two daughters and learning carpentry. "Would like to hear from lost friends and classmates."

Guy W. Blanchard, BSc(Eng), has been appointed senior reservoir engineer by Sceptre Resources.

Subrata Dasgupta, PhD, is Edr iston Professor of Computer Science at the Center for Advanced Computer Studies at the U of Southwestern Louisiana. **J. David Kinniburgh, BA**, was recently named group sales supervisor -Alberta by Wawanesa Life.

Paul I. Domby, BEd, is at the U of Calgary on study leave from Edmonton Public Schools. In Calgary he is pursuing a master's degree in school music

and a diploma in the Kodaly Summer Programme. Last fall he attended the 8th International Kodaly Symposium where he reported on his work which relates to the effect of singing on auditory discrimination in beginning violin instruction.

'77

Elaine M. Furnell, BSc, recently completed an extended studies diploma (education) and a teaching certificate at Simon Fraser U, where she is now teaching and counselling reading and study skills.

Nola Adam, BEd, is completing her first year in the Yukon as teacher-librarian at Whitehorse Elementary School, a French-immersion facility "Looking forward to a lengthy stay here!"

Sandy Murray, MD, of Red Deer is president-elect of the Alberta Medical Association.

Lane F. Borstad, BEd, and **Jeanette L. Borstad**, BEd, are studying at Queen's University, Kingston, Ontario. He is pursuing an MA in Canadian art history; she is working towards an MEd in curriculum. **William G. Keys**, LLB, has been appointed general counsel and corporate secretary by Bow Valley Industries Ltd.

Timothy J. Tuttle, BA, is now manager of Canada Life Mortgage Services' North Alberta branch located in Edmonton.

Ping-On Cheng, BEd, after having taught school and served as a social worker, entered theology studies and is now pastor for Immanuel Christian Reformed Church in Richmond, B.C.

Marlene A. Henderson, BEd, left Edmonton after 45 years to embark on a new life. She now lives in Saskatoon, where she is a sale associate, hospital division for Squibb Canada, and is enjoying golf, tennis and

travelling.

'78

Matthew Petley-Jones, BA, has his own art gallery in Vancouver. The Petley Jones Gallery specializes in 19th and 20th century Canadian and British art as well as contemporary Canadian and Japanese wood blocks.

Bryan R. Moon, MA, '74 BA, now living in Ottawa is the author of *The Grapefruit Tree*, a novel which is being released in four volumes. The first volume, *Seeds*, was released at the end of 1987. The subsequent three volumes to be released in 1988 are *The Western Kingdom*, *Union Day*, and *Harvest*.

Valerie Ruedy (Kvinsland), BA, is director of MIS at Medical Incorporated in St. Paul, Minnesota.

Susan Aldrich (Kimball), BEd, and her husband and three children moved to Beaverton, Ontario where her husband became a minister of a local church and she substitute teaches. "Miss the West!"

Vijay Raghavan, PhD, is an associate professor at the Center for Advanced Computer Studies, U of Southwestern Louisiana.

Norma Fraser, BEd, is teaching at Hilltop High School in Whitecourt, Alberta.

Wendy A. Antoniuk (Matewush), BSc(PT), helps clients manage their chronic pain at the Workers' Compensation Board Rehabilitation Centre in Edmonton; and reports that she and her husband are having a wonderful time raising their two boys.

Gary Dahl, BSc, recently accepted the position as director, marketing services for Zurich American Life in Chicago.

Art Borkent, MSc, '75 BSc, is a research scientist with Agriculture Canada.

Correction

The article entitled "In the Footsteps of the Pioneers," which appeared in the Spring 1988 issue of *New Trail* contained two errors of fact. A caption accompanying a photograph of the original Medical Building gives the date of the building's opening as 1916—in fact it was opened in

September 1921. In the article it is stated that insulin was patented in the names of Banting, Best and Macleod—we are grateful to Professor Emeritus H.B. Collier who did a bit of detective work to confirm his recollection that the patent was, in fact, issued in the names of Banting, Best and Collip.

'79

Marvin M. Soroka, BComm, '76 BSc, has been named assistant manager of Price Waterhouse's commodity tax group in their Edmonton office.

William J. Morgan, BComm, is continuing his work with capital insurance companies but moving onshore from Bermuda now that he's been appointed managing vice-president of Alexander Insurance Managers (Canada) Ltd. in Vancouver.

Steven Mihok, PhD, and **Anne Mains**, '78 BSc, work at the International Centre of Insect Physiology and Ecology in Nairobi. There they study the population biology of tsetse flies and the dynamics of sleeping sickness in East African mammals.

Douglas Ross, BSc(Eng), is completing an MEng from the U of Saskatchewan while working as a traffic and roadways engineer for the City of Regina. His second daughter was born last year.

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For more information about the 1988 Discovery Adventures, please contact the Office of Alumni Affairs, (403) 432-3224.

*Prices shown are per person (double occupancy) from the gateway city indicated.

Garry T. Nielsen, BComm, and **Catherine M. Nielsen**, BA(RecAdmin), will miss the temperate climes, tall cedars, mountains and soaring eagles of the Fraser Valley but are looking forward to new adventures now that they and their daughter have moved to Winnipeg, where Garry is now terminal manager for Petro Canada. In B.C. Garry worked in Petro Canada's marketing department and Catherine as administrative manager for the Langley Times Newspaper.

'80

Arunkumar Abraham, BA, is serving as a research assistant in the executive office of the International Development Research Centre. Having earned an MA at the Norman Paterson School of International Affairs, Carleton U, he plans to enroll in a doctoral program in economic anthropology and continue his research on multinationals in the pharmaceutical industry.

James P. Dittich, BSc, has been appointed senior geophysicist by Sceptre Resources.

Alison M. Burns, BSc(MedLabSci), has been very active in the Victoria, B.C. branch of the Alumni Association, having served two years as secretary and as president this past year. Having enjoyed "the good life and snowless winters," Alison is somewhat reluctantly returning to Edmonton in July. There is a bright side though: in August she will be marrying **Robert W. Poole**, BEd, a physical education teacher at Harry Ainlay High in Edmonton who is completing a master's degree in sport psychology at the U of Victoria.

David T. Coglon, BA, and **Lorna J. Coglon (Rydman)**, '79 BEd, and their one year old son are living in Toronto. David, who received a master's degree in journalism at Chicago's Northwestern U, is a public affairs writer for the Toronto Transit Commission. Lorna is traffic co-ordinator for an importing company.

Ruth Grue (Ramstad), BEd, '49 Dip(Ed), who in 1986, after teaching for 24 years at elementary schools in the Camrose, Alberta area, and her husband enjoyed a trailer holiday to the Yukon and Alaska last year.

Alvin A. Ropchan, BA, has worked with the Royal Bank of

Canada since graduation. Last year he was transferred to Toronto, where he is senior commercial dealer -Ontario in the Bank's investment banking and treasury division.

Leslie Hawrylyshyn, BA, is managing director of a venture capital firm, Euroventures-Genevest, in Geneva, Switzerland.

William J. Marshall, MSc, has been promoted to planning and liaison development forester, recreation section in B.C.'s ministry of forests and lands.

Mark H. Yates, BComm, is involved in real estate development and investment in Colorado and Hawaii. Although he and his wife now live in Colorado, he retains his Edmonton office.

Karamchand Ramotar, BSc, has completed a PhD in microbiology at the U of Manitoba and has now moved to a post-doctoral fellowship at Mt. Sinai in Toronto.

Carol Fairbrother, MLS, and her husband announced the birth of a daughter last summer. Carol works for the Canada Institute for Scientific and Technical Information in Ottawa.

'81

Sarah Weaver, MA, and partner are opening an Earth Friendship Centre near Salmon Arm, B.C. The Centre combines outdoor adventure and a nature retreat with environmental and personal learning.

Laurel L. Robie, BSc(OT), is in her seventh year as an occupational therapist at Glenrose Rehabilitation Hospital, Edmonton.

'82

Alyce Campbell (Nekolaichuk), MBA, '73 BSc, and **Duncan C. Campbell**, '76 MSc, '71 BSc, now reside in Oregon, where Alyce, who earned a PhD in finance at UBC, teaches at the U of Oregon's College of Business Administration. Duncan resigned from the U of A after 11 years and is now "studying telemark skiing."

Alan G. Hooper, BSc, is now working with On-site, a job creation program which places engineers and scientists in positions related to environmental protection. He invites interested graduates to contact him at 452-4958, Edmonton.

Carl L. Derfler, MMus, has been working on a DMA degree in music composition at the U of Colorado and plans to continue his degree work at the U of Oregon in September.

Mary C. Cronin, PhD, '80 MEd, and **Patrick C. Douaud**, PhD, are both recent landed immigrants to Canada and employed as assistant professors of education at the U of Regina.

Jody Moher (Kosanovich), BSc, is practicing law with the firm Naylen, Warsaba in Regina.

Beverly J. Swanson (Christensen), BEd, is teaching school in Camrose, Alberta.

'83

David M. Rogowsky, PhD, '80 MSc, senior structural engineer, UMA Engineering Ltd., Winnipeg and **James G. MacGregor**, '56 BSc(Eng),

university professor and chairman of the civil engineering department at the U of A share the 1988 Reese Award, presented by the American Concrete Institute for the most meritorious paper on structural engineering research.

James R. Hammond, PhD, and **Catherine A. Reynolds-Hammond**, '82 BA,

are looking forward to settling in London, Ontario now that James has accepted a position as assistant professor in the department of pharmacology at the U of Western Ontario, after five years of postdoctoral studies beginning in Cambridge, England followed by Halifax (Dalhousie) and Montreal (McGill).

Bud Yung, MEng, is employed in Ottawa, working in the area of wafer fabrication.

Michele Stroud, BSc(HEC), has wedding plans for this summer. They have taken her to Ontario, where she is now working as an administrative dietician at Windsor Western Hospital Inc.

Cheryl Ann Arscott (Derworiz), BA, was married last summer and now teaches grades five and six in Pickering, Ontario.

Maureen Holt-Mitchell, BSc(Nu), reported early this year that she was enjoying life in Scotland. "At present I am not employed but am making the most of the opportunity to tour Europe and the U.K."

Lorraine McFadyen, BSc(Nu), who plans to marry this summer, is studying medicine at the U of Calgary.

Lori Harrison (Callaghan), Dip(Dental Hygiene), was married in 1985 and works in a

Kelowna, B.C. dental office. "No kids yet."

Bryan Mekechuk, BComm, transferred to Toronto in 1986 and is now an audit manager with Clarkson Gordon, working with public and SEC clients.

Rakesh Jain, MSc, is engaged in research on weed control in citrus orchards as a postdoctoral research associate at the U of Florida.

David Byers, PhD, is an assistant professor of pediatrics at Dalhousie U in Halifax.

Angela Waleski, MD, '81 BMS, and **Mark Wagner**, BSc(Eng), '84 MBA, have been living in Ottawa since their marriage in 1985. She has been practicing medicine and he has been employed in the networks technology division, Bell Northern Research. They are now on a nine-month, round-the-world trip.

'84

Cliff McAuley, BEd, and **Caroline McAuley (Huinzanga)**, '83 BSc(HEC), live in Vermilion, Alberta. Cliff teaches accounting at Lakeland College and Caroline, on leave from her position as dietician at St. Joseph's Hospital, Vegreville, is enjoying time at home with their new daughter.

Lubomyr Luciuk, PhD, was recently awarded a Canada Research Fellowship by the Social Sciences and Humanities Research Council. During the three-year tenure of the award he will teach a course on the Soviet Union at Queen's U in Ontario and continue research on 20th century Ukrainian history and the political geography of Ukrainian refugees.

Vincent P. Zuck, MD, recently received the Internal Medicine Resident Academic Achievement Award from the Mayo Clinic, Rochester, Minnesota.

Sabrina Broadhead, BPE, is a regional recreation development officer in the Fort Smith region of the N.W.T.

Catherine Mak, BSc, is director of a company involved in garment manufacture and export in Hong Kong.

Mark Forhan, BSc(Ag), and **Seana Forhan (McKnight)**, BSc(Ag), now reside in Calgary, where he is a research associate with Biotechnica Canada, Inc., having earned a master's degree in plant breeding from the U of Saskatchewan.

Joanne C. Weber, MLS, earned

a BA honors certificate and a BED at the U of Saskatchewan in the past few years and is now working on an MA in the education of the hearing impaired at Gallaudet University, Washington, D.C. **Ross Gould**, BSc, is studying the characteristics of the cell membrane receptor for the hormone prolactin as a graduate student in molecular endocrinology at McGill. **Vesna Bosnjak**, BEd, who recently earned an MA in speech-language pathology from Western Illinois U, is the regional speech-language pathologist and program manager for the northern interior of B.C. **Karl J. Veldkamp**, LLB, is practicing corporate commercial law with a ten-lawyer firm in Toronto.

'85

Philip Ewing, BSc(Eng), now married and the father of two daughters, moved to Toronto after graduation and is a programmer/analyst for IBM. **Laurel A. Kruger**, BEd, was awarded a graduate fellowship and is pursuing a master's degree in educational psychology (gifted education) at Purdue U in Indiana. "It's a great place!" **Pete Ferguson**, PhD, and his wife announced the birth of a son last summer. A post-doctoral fellow involved in anti-cancer research at the U of North Carolina, he plans to return to Canada this year. **Kim Mathias (Chernowski)**, LLB, having obtained an LLM in transnational business and international tax, works in the international tax services division of Price Waterhouse in Los Angeles. **Robert Park**, BSc(Eng), is a maintenance engineer with Suncor Inc in Ft. McMurray, Alberta. **Philip Ng**, MD, is in private medical practice in Northern Ontario. **Catherine Wynnyk**, MEd, '77 BEd, '82 Dip(Ed), reports having gone from one extreme to another: from six months in the Caribbean to teaching in Pelly Bay, N.W.T., where she is involved in the multi-graded, cross-cultural teaching of English as a second language. **Catherine Snell (Carter)**, BSc(Nu), and **Mark Snell**, BA, moved to Ontario, where Mark serves in the RCMP and

Catherine is finishing her U of A MNU thesis. **Terence Holowach**, BSc, is the programmer/analyst for the U of A's Faculty of Graduate Studies and Research. **Geoffrey Hatfield**, BComm, and **Marcelle Sprecher**, BComm, were married last summer and live in Vancouver. She is a benefits program administrator at UBC, and he is a management consultant with Alexander Proudfoot. **Judith Hole**, BEd, '82 BA, teaches French at an elementary school in Calgary. **Anne M. Stephen**, BA, is in a psychology MSc program at the U of Calgary and enjoying the "close knit atmosphere of Grad School." **Michael Dzenick**, BComm, who is enrolled in the combined MBA/LLB program at the UBC, is studying in Paris on an exchange with Ecole des Hautes Etudes Commerciales.

'86

Angela Kochan, MSc, is head coach for women's gymnastics and teaches in the department of physical and health education at Queen's University in Ontario. **W.C. Anita Tang**, BSc, joined Sony Corporation's planning staff when she returned to Hong Kong in 1986. She now works for Kodak (Far East) Ltd. as a planner for the local and PRC market. **Katherine L. Wright-Alvarez**, BA, now lives in Colorado, where she is a counsellor at a home for delinquent boys. **Beverly A. Woon Choy**, BSc(PT), works as a physiotherapist in Edmonton. **Paul E. Jankowski**, BSc(Eng), is a design development engineer for the Ontario ministry of transport. **Philip R. Beaulieu**, BComm, has entered a PhD program in accounting at the U of Washington. **John W. North**, BA, leads an interesting life: in his second year of law school at Osgoode Hall, he also works as a model in Toronto and New York. Toronto's "Bachelor of the Year" in 1987, he won't be eligible much longer -he plans to be married in Switzerland in August. "I would love to hear from my U of A friends before I leave for Europe." **Robert J. Storey**, BSc(Eng), is now a project engineer for ACCO Canadian in Burlington,

Ontario—"after being on a four-month 'coffee-break'." **Charlene Spicer**, BEd, teaches a learning disabilities class in Calgary.

'87

Winslowe Lacesso, BSc, is with the software research and development group at the U of Calgary. "Sure miss the beautiful U of A campus! And Hub, and Rutherford, and . . . V-Wing." **Ana M. Chai Chong (Young)**, BSc(PT), is now married and teaching and practicing physiotherapy in Jamaica—she invites any U of A physiotherapists who visit there to look her up. **Mark Lea-McKeown**, PhD, who expresses a nostalgia for the U of A and life at Michener Park, is teaching a comparative education course for graduate students this summer at the U of Manitoba. **Jody Marsh**, BEd, is completing her second year of teaching math at W.E. Hay Composite High School in Stettler, Alberta. **Darin M. Lee**, BSc(Eng), is a junior process engineer with Echo Bay Mines at their Lupin mine in the N.W.T. **Neil Hansen**, BSc(Eng), underwent second language training at CFB St Jean, P.Q. after joining the Canadian Armed Forces as an aerospace engineer. **Barbara G. Jewell**, BSc(Nu), works at a one-nurse community health office covering McBride and Valemount, B.C. "Life in the mountains is marvellous." **Bruce Stenzel**, BSc(Eng), invites his fellow electrical engineers to give him a call if they are ever in Toronto. **Samson E. Ong**, BA, is director of marketing, Malaysia for the International Trade Centers of Iowa affiliate company in Malaysia. She is also nearing completion of an MBA degree at Drake U in Des Moines, Iowa. **Claire I. Domby**, BEd, recently back from Korea now teaches business studies at Mt. Royal College Calgary, while pursuing a diploma in adult education with emphasis on ESL. **Rosalyn Hughes**, BSc, is computer systems co-ordinator for Edmonton's Good Samaritan Society. **Wilfred E. Popke**, BSc(Eng), works for Petro Canada Inc. in Calgary. **Betty L. Murza**, BEd, is teaching high school language arts in Ft. McMurray, Alberta.



In Pursuit of Excellence: A Video

In Pursuit of Excellence is an 18-minute video produced by Sunwapta Broadcasting Corporation for the University of Alberta. It was made possible by the generous support of the President of Sunwapta Broadcasting, Dr. G.A. Rice, and a grant from the Alma Mater Fund.

It is a colorful and comprehensive look at our Alma Mater, revealing many facets of the University of Alberta, its vibrancy and its historical pursuit of excellence.

In Pursuit of Excellence is available for purchase or loan in all of the popular video formats. It is an ideal way to remember or rediscover Canada's second largest university.

For further information about this video, please contact the:

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